

Display the Gameplay but Playfully

**Visual discourse analysis and comic-based research
on game museums in Finland and South Korea**

Solip Park

Aalto University

School of Arts, Design and Architecture

Nordic Visual Studies and Art Education

Master Thesis

Supervised by Prof. Mira Kallio-Tavin

Author Solip Park

Title of thesis Display the Gameplay but Playfully: Visual discourse analysis and comic-based research on game museums in Finland and South Korea

Department Aalto University School of Arts, Design and Architecture

Degree programme Nordic Visual Studies and Art Education

Year 2019

Number of pages 197

Language English

Abstract

The term 'game museum' refers to an institution that conserves, archives, and exhibits the history of games. This thesis qualitatively compares the case of the Finnish Museum of Games (FMG, Finland) and Nexon Computer Museum (NCM, South Korea), concentrating on their choices of the object and the aesthetical expressions in the exhibition space. The goal of this thesis is to find the influence of curators and potential game museum visitors on the game museum's choice of object and aesthetical expressions. This thesis used a combined multi-method of Visual Discourse Analysis and Comic-Based Research. The research questions of this thesis are: 1) How do the FMG and NCM display games differently in the museum space? 2) How do curators and potential museum visitors' gaming memories relate to the choices of displayed objects and aesthetical expressions in FMG and NCM? 3) How can comics, as a research tool, supplement the study of game museums and their potential visitors?

The findings from the thesis indicate that the choice of the objects and aesthetical expressions in FMG and NCM were linked with the sociopolitical discourses upon their establishment and the personal gaming memories of curators. Another important factor discovered is that both game museum curators and potential visitors tend to reflect their memories when perceiving the topic of game museum and their exhibitions. Moreover, both the curators and potential visitors were motivated to establish a positive cultural message on gaming.

The thesis suggests that game museums may have to update their exhibitions frequently in order to remain engaging for future generations. This would involve game museums to learn the trend and memories of potential visitors and the games that they enjoy. The use of educational comics, like this thesis research, could be one of those methods for game museums to learn potential visitor's interest.

Keywords Game Museum, Game Culture, Game Heritage, Visual Discourse Analysis, Art-based Research, Comic-based Research

Acknowledgments

I send thanks to my supervisor Prof. Mira Kallio-Tavin at Aalto University and my colleagues at Nordic Visual Studies and Art Education (NoVA) who supported me throughout my journey for this thesis research.

Special thanks to Niklas Nylund, Mikko Heinonen, Outi Penninkangas, and Wilhelmiina Saikkonen at the Finnish Museum of Games, of providing their valuable time and effort to sharing their insights about Finnish gaming history with me.

Special thanks to Yunah Choi and Sang-Gon Woo at Nexon Computer Museum, and appreciation to all my former colleagues who founded the museum together.

Warm thank you to every reader of “A Brief History of Digital Play: Season 3”, and Lukas Prediger for proofreading my comics and thesis.

Love you, mom and dad.

Table of Contents

<i>Abbreviations.....</i>	<i>6</i>
Prologue: Why Games, Education, and Museums Personally Matter to Me.....	8
Chapter 1. Introduction	10
<i>Game Museums, Games in Museums.....</i>	<i>10</i>
<i>Retrogaming, Nostalgia and Game Museums.....</i>	<i>11</i>
<i>The Aim of this Thesis.....</i>	<i>24</i>
<i>Structure of this Thesis.....</i>	<i>25</i>
Chapter 2. Literature Review: Preserving Game and Games as Interactive Media	26
Chapter 3. Methods: Visual Discourse Analysis and Comic-Based Research.....	30
<i>Visual Discourse Analysis.....</i>	<i>32</i>
<i>Comic-Based Research</i>	<i>40</i>
Chapter 4. Research Observations, Findings, and Results.....	45
<i>Stepping Into the Museum Space.....</i>	<i>45</i>
<i>Illustrating the Findings Into a Comic and Story</i>	<i>70</i>
Chapter 5. Conclusion.....	76
<i>Summary of Findings and Results</i>	<i>76</i>
<i>Conclusion: Displaying the Gameplay but Playfully.....</i>	<i>78</i>
References	80
Appendix	83

Abbreviations

FMG The Finnish Museum of Games

NCM Nexon Computer Museum

ABR Art-Based Research

CBR Comic Based Research

Prologue: Why Games, Education, and Museums Personally Matter to Me

The issue of the generation gap is one of the major social concerns in recent South Korean education. The survey indicates that the reason behind the generation gap is due to a lack of conversation and common interest between parents and children, with a shocking result of 50.8% South Korean parents of 1-12 graders spending less than 30 minutes per day to talk with their children¹. Thus my interest has been helping the parents, teachers, and students to find the mutual topic of conversation, in order to boost the staggering lack of conversation between the different age groups. During my time working at Nexon Computer Museum, I found some hope regarding that.

In the autumn of 2013 at the morning of 10 a.m., my colleagues and I opened the door to the workshop room and welcomed 10th graders on a school field trip. It was one of the first schools to visit NCM on a field trip. After my colleague guided 40+ students to the workshop area, the last person stepped into the door – their teacher, male, around 50 years of age. He verbally expressed how much he felt ‘discomfort’ of visiting the place. It turns out that the vast numbers of students requested the school administrations to visit NCM as a field trip, which was something unprecedented in their school’s history. “Although I appreciate student’s active participation,” he said, “I do not want to see my students playing video games.” A couple of students whispered to me, of “how distanced” their teacher seemed.

We then continued the field trip to the exhibition area. However, soon afterward, our team noticed that the teacher went missing. "Where is your teacher?" I asked one of the students. The word spread, and soon then we were able to hear the shouting from the back, "he is playing games at the other room." We again found the teacher later in the day, surrounded by a group of his students. "I used to play this (game) when I was young," he claimed, firing at the aliens in the arcade game “Galaga” (1981). “I totally forgot about this – and did not even

¹ Korea Foundation for the Advancement of Science and Creativity, 2016

notice that you can also call this a *game*²". He actively invited his pupils to join him, and they did. The surprised statement of one of the students echoes in my head until today.

"I thought teachers are a different being — a well-taught, elite, grown-up. But today, (I noticed that) he is also like us. It (feels) good to be closer."

During my time working as a founding member of NCM, I have witnessed many incidents when families, teachers, and students start bonding by remembering, talking about, and playing games together without even noticing it. So maybe, game museums can become a bridge for intergenerational communication; a cross-generational conversation and learning while naturally playing old games in the game museum together. Of course, one game museum would not be able to solve the entire generational gap in Korea but could initiate a meaningful start. This strong belief is what holds my passion for gaming culture, game history, and museum as part of lifelong learning.

² The Korean language does not have words that directly corresponding with the term 'game' defined in the North America and European context. Instead in Korea, the word "game (게임 gae-im)", a loanword from English, is generally used as 'digital game' – separated from the concept of traditional, analogue, or physical "play (놀이 nol-ee)."

Chapter 1. Introduction

Game Museums, Games in Museums

The term ‘game museum’ generally refers to an institution that conserves, archives, and exhibits the history of games. The number of game museums has substantially increased in the past years. Followed by the establishment of *Computerspielemuseum*, the world’s first game dedicated permanent museum located in Berlin, Germany, at least five private or public permanent game museums have opened worldwide in a past decade only³. The cases of game exhibition in other type of museums are also on the rise, with a growing interest from technology museums and science centers since the 1990s that tend to introduce participatory or interactive exhibits for public learning. A thriving perspective of “(game as) mediators between many different and important sectors of contemporary cultures” is further increasing the demand for the digital games in the traditional museum space (Suominen, Reunanen, & Remes, 2015, pp. 2-3). The most widely known story is the case of MoMA (the Museum of Modern Art) in New York, USA; a total of 14 video games were selected as part the institution’s new applied design collections, including *Pac-Man*, *Super Mario Bros.*, and *Tetris*. Considering the public popularity and the reputation of MoMA, this was perhaps by far the most highly spotlighted case of digital games represented in the modern museums and art galleries. As such, the game museum is an emerging phenomenon in the worldwide museum scene.

In this thesis, the term ‘game museum’ is narrowly used to refer to a permanent museum that is dedicated the history of games. In order to narrow down the scope of this thesis research, I exempted the temporary game exhibitions as well as contemporary exhibitions with gameplay components or game exhibit within other forms of museums (for example, science centers or technology museums that use games to supplement their cultural messages) from this thesis. In a general sense, game museums consist of one or more permanent and temporary exhibitions as well as dedicated museum storage and conservatory policy of how to preserve both digital and non-digital games. Game museums often consist of numbers of interactive objects in the exhibition space that are accessible for visitors to play.

³ This includes game museums opened in the United States, Italy, United Kingdoms, France, South Korea, and Finland.

Retrogaming, Nostalgia and Game Museums

Previously, researchers have witnessed a variety of practices of *retrogaming*⁴ emerge into some form of game exhibition and then eventually, game museums (Newman, 2012; Newman, 2004; Naskali, Suominen, & Saarikoski, 2013; Suominen, Reunanen, & Remes, 2015). A Finnish game researcher, Jaakko Suominen, defines *retrogaming* as a “practice that gives forms to gaming related nostalgia” in which “a shared cultural object (...) acts as the trigger for nostalgic experiences.” Moreover, it has “private, individual, and unique features” (Suominen, Reunanen, & Remes, 2015, pp. 77-78).

After studying various cases of temporary game exhibitions from the late 1990s to early 2010s, researchers argued that private contributors, game hobbyists, and collectors, are indeed “important partners in (game) exhibition projects” and their “memories, feelings and personal aspects” tend to be reflected “in exhibition design, in addition to the collective perspective” (Naskali, Suominen, & Saarikoski, 2013, p. 237). If it is indeed nostalgia that influences the conservation of the retrogaming and the choices of the object and aesthetical expressions of temporary game exhibitions, then would this also apply to the case of permanent game museums? Would the nostalgia of curators and visitor’s, their private, individual, and unique experience, can create a consistent visual discourse also in the permanent institution?

Therefore, I have set the aim of this thesis to identify the impact of nostalgia of curators and visitors, on the game museum’s choice of object and aesthetical expressions. Moreover, since the nostalgic experiences are, “private, individual, and unique” (Suominen, Reunanen, & Remes, 2015, pp. 77-78), the pre-assumption of this thesis is that comparing culturally distanced game museums could provide a vital clue. If geographically and therefore culturally distanced game museums indeed presenting a different visual discourses even when displaying identical objects, then it may be considered that the gameplay experience and memories of curators and visitors indeed influence the museum. Therefore, finding the right examples to compare was essential to this thesis. Fortunately, there is one permanent game museum across the earth, geographically isolated from others; the Nexon Computer

⁴ *Retrogaming* refers to the practice of playing and collecting original (“classic”) video and computer games of the 1970s, 1980s, and early 1990s, or using, for instance, emulators for playing them. In the wider perspective, *retrogaming* also refers other activities, such as the production of a broad range of consumer products, textiles, accessories, game related music videos, literature, as such. (Suominen, Reunanen, & Remes, 2015, p. 77)

Museum in South Korea. South Korea is geographically and culturally distant from Europe and the USA, where the majority of game museums are located, and has its own solid massive-multiplayer online (MMO) centric gaming industry⁵ and eSports culture. My experience as one of the founding members of Nexon Computer Museum in 2012-2015 provided useful access to the institution's decision-makers. Then, I selected the Finnish Museum of Games, one of the recently established game museums in Europe, which also happened to be closest to my current location (Finland), as a comparative sample.

Nexon Computer Museum

Nexon Computer Museum (넥슨컴퓨터박물관) is a private-owned and public-authorized museum, located in Jeju Island, South Korea. The museum opened in July of 2013 with 6,000 artifacts including 1,800 objects displayed in the exhibition space. Nexon Computer Museum is claimed to be the “first permanent museum in East Asia dedicated to the history of video games and computers” (Nexon Computer Museum, 2014).

The museum has dedicated a 4-floor high building with a total of four exhibition spaces, additional to museum store and cafeteria. Each of these museum exhibition spaces has different title and theme: The 1st floor “Welcome Stage” concentrates on the history of personal computers and digital technologies that popularized the digital computer in the mainstream. The 2nd floor “Open Stage” focuses on the history of arcade and video game consoles with the format of the open library, while the 3rd floor “Hidden Stage” hosts a special exhibition area and a education (workshop) area. Lastly, the B1 floor “Special Stage” displays retro arcade games. Figures 1 – 6 below showcase the photos of each of NCM's exhibition spaces.

NCM is currently under direct management, as a subsidiary institution, of South Korean online game publisher Nexon and their holdings company (NXC). Therefore, the museum is granted access to many Nexon-owned intellectual properties, including the visual assets of the online games “The Kingdom of the Wind,” “Maple Story,” “Kartriders,” “Mabinogi.” The museum is recognized by the city of Jeju, as ‘category one specialized museum (1종 전문 박물관)’ under the Enforcement Ordinance Act for Museum and Gallery (박물관 및 미술관 진행법 시행령).

⁵ South Korea ranked #4 in global gaming industry, with estimated 5.6 billion USD annual revenue. (Newzoo, Global Games Market Report 2018). <https://newzoo.com>



Figure 1 The view of Nexon Computer Museum



Figure 2 NCM 1st Floor "Welcome Stage."



Figure 3 NCM 2nd floor "Open Stage."



Figure 4 NCM 2nd floor "Open Stage."



Figure 5 NCM 3rd floor "Hidden Stage."



Figure 6 NCM B1 floor "Special Stage."

The Finnish Museum of Games

FMG is a public museum located in Tampere, Finland. It was opened to the public in January 2017 as one of the museums under the govern of Tampere city's Museum Centre, Vapriikki. Upon its establishment in 2017 FMG archived 100 Finnish games from the years 1862 to 2015, more than 60 of which are playable for the visitors (Heinonen, 2017, p. 83). In general, Vapriikki's primary target visitors are above 50 years of age – which is the most common museum visitors in Finland. However, the Finnish Museum of Games tries to go beyond those boundaries. During my visit to FMG, most museum visitors I have witnessed are young family visitors in their 30s to 40s accompanied by their children. The museum is also offering various public events to encourage young game fan's visit. Figures 7 – 10 showcase some of the noticeable areas of the FMG exhibitio.

The Finnish Museum of Games showcases the Finnish gaming culture in a versatile manner and tells the story of how digital gaming in Finland started and developed over the years⁶.

⁶ "The Finnish Museum of Games" Vapriikki official website



Figure 7 The Finnish Museum of Games



Figure 8 The Finnish Museum of Games



Figure 9 The Finnish Museum of Games “Arcade game area.”



Figure 10 The Finnish Museum of Games “Nintendo shop.”

The Aim of this Thesis

The primary aim of this thesis is to identify the influence of personal gaming experience and nostalgic memories of curators and visitors to the museum's choice of object and aesthetical expressions – by comparing geographically and culturally distanced game museums, FMG and NCM. Therefore, this thesis seeks to answer these questions:

- How do the FMG and NCM display games differently in the museum space?
- How do curators and potential museum visitors' gaming memories relate to the choices of displayed objects and aesthetical expressions in FMG and NCM?
- How can comics, as a research tool, supplement the study of game museums and their potential visitors?

My primary assumption is that personal gaming memories and nostalgia of curators and potential museum visitors indeed influence both the game museum's choices of the object and choice of aesthetical expression. Moreover, since South Korea and Finland have distinctively different digital gaming history in the 1970s to 1990s⁷, the exhibitions in FMG and NCM are anticipated to be significantly different.

However, inevitably, limiting the cases only from Finland and South Korea binds this research to findings that may be specific to those regions. Considering the increasing numbers of game museums and game archives worldwide, the case study of two samples is a small number to establish a general proposition. Therefore, I see the potential of this approach as an exploratory example. The findings and experiences generated by this research will point towards the areas worth investigating in other game museums.

This thesis also does not address the technical side of game museum operations or preservation. Instead, it concentrates on the visual representation of game museums in their exhibition space.

⁷ For example, the dominant digital gaming platform in South Korea in the 1970s to 1990s were IBM clone PCs either replicated or imported from Japan. Also, MSX and MSX2 computer architecture strongly influenced Korean digital games, including the Korean video gaming console machine Zemmix, released in 1985. In contrast, Finland's digital gaming culture in the 1970s to 1990s was influenced mostly by British or American hardware – one of the dominant platforms of which was the Commodore 64, an American personal computer released in 1982.

Structure of this Thesis

Following the introduction in Chapter 1, Chapter 2 is dedicated to a literature review and discusses the existing research on game museums.

Chapter 3 then describes the particular research method of this thesis; Visual Discourse Analysis and Comic-Based Research. The chapter also discusses how these methods were strategically combined to deliver the thesis.

Chapter 4 details the data collection process. First, the on-site observation and dialogues at FMG and NCM comparing three topics; FMG and NCM's display of the game 'Pong', the topic of 'the origin of the (modern) game,' and the topic of 'the timeline of video game consoles.' Second, the collected data were presented as a webcomic to potential museum visitors. And the response of those comic readers was documented and analyzed.

Chapter 5 discuss the results of this thesis research and, finally, Chapter 6 concludes the thesis by summarizing the results and further questions.

Chapter 2. Literature Review: Preserving Game and Games as Interactive Media

This chapter reviews existing academic research on game museums – or game exhibitions that are relevant to the establishment of a game museum. Despite the increasing number of game museums worldwide in the recent decade, little has been discussed about them in the academic scene. Throughout this literature review I have also noticed that the academic discussions of the phenomenon of the game museum and their establishments were primarily led by engineers, historians, archivists, and librarians. The two primary scholars whose work I have reviewed throughout the thesis writing were Prof. Jakko Suominen at Turku University, Finland, and Prof. James Newman at Bath Spa University, UK. Both have dedicated their recent research to studying *digital game preservation*, and practices of game exhibitions and the conservation of the history of games. Suominen’s research concentrates on acknowledging game museums as a heritage institution (Suominen J. , 2008; Suominen, Sivula, & Garda, August 2018), including his comprehensive research on game exhibitions from the 1990s to early 2010s (Suominen, Reunanen, & Remes, 2015). Newman focuses on the dilemma of the originality of game preservation and playful game representation in the museum space, also intimately involved with the National Media Museum (UK) on the National Videogame Archive project. (Newman, 2004; Newman, 2009; Newman, 2012)

A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment (ICOM, 2017).

The formation of the modern museum and their role has been discussed widely throughout museum studies. In general, in modern museums, objects are “classified according to what are claimed to be ‘scientific’ or ‘objective’ principles, whether they be drawn from notions of historical progress, scientific rationality or anthropological analysis” (Bennett, 1995; Rose, 2016, p. 230) Also, the recent statement from the International Council of Museums emphasizes the role of the museum as a heritage institution within the museum community (ICOM, 2017). At the same time, museums are also becoming a space where individuals can

practice their self-formation. In recent years, museum researchers have been exploring many ways to reboot the museum space to become a site that encourages visitors to engage and debate (Houlberg Rung, 2008). As such, a growing number of visitor-oriented contemporary museums such as science centers, technology or machinery museums, toy, and other entertainment-related museums are emerging.

In regards to the phenomenon of game museums, various researchers have been pointing out the preservation of digital games and its environment. Academic debate, exploration, and practices to execute this preservation is generally called (*digital*) *game preservation*, which includes the field of studies of protecting and processing tangible gaming objects (hardware and software) as well as implementing the conservational policies to register and categorize digital and non-digital games. *Digital game preservation* is indeed one of the dominant discourses that surround the phenomenon of the game museum. (Lowood, et al., 2009; StuckeyHelen, SwalwellMalanie, NdalianisAngela, VriesDenis, 2013; Swalwell, 2013) Game professionals and researchers have tackled the field of *digital game preservation* since the late 1990s, mainly alarmed by the “obsolescence” of digital games and its disappearance (Lowood, et al., 2009, p. 143). Like other modern media in digital format, all digital games are only compatible with specific versions of operating systems such as Windows, Mac OS, Android, Linux, as such. Moreover, these operating systems function only within specific hardware environments and require various other peripherals like a monitor, keyboard, computer mouse, controller, and such. How to preserve all these operating systems and the environment together, while preserving the condition of digital information inside the volatile plastics? What about network-based games such as online games, smartphone games, and downloadable content, which regularly update and (at some point) discontinue their services? While researchers and conservators are actively engaging on these questions, Nylund points out, the “questions of how and when to conserve game remain unanswered” (Nylund, 2017, p. 33). Suominen argues that “digital games are still in the early stages of the cultural heritage process” and therefore, may consider as an *emergent heritage* (Suominen, Sivula, & Garda, August 2018, p. 177).

Some few digital game preservation practices and projects have inspired the establishment of the institution (Lowood, et al., 2009; Newman, 2012; Nylund, 2015), by forming an alliance of curator (museum institutional and professional), collector (preservation and participatory history), and gamer (player experience) – which Suominen describes as “heritage community” (Suominen, Sivula, & Garda, August 2018, p. 191). Some of the

known cases of these institutions are National Videogame Museum⁸ in Texas, and The Museum of Art and Digital Entertainment⁹ in California, which were both initiated by a community of private game collectors and restoration technicians.

It is also essential to address that digital game is an interactive media, which requires a different approach in terms of conservation and display techniques in the museum space. The meaning of digital games can only indeed emerge from the interactions between players, system, and context (Salen & Zimmerman, 2004; Juul, 2011; Stenros, 2015). Therefore, to display its interactivity in the museum space is not an easy task, which James Newman describes as “digital games simply cannot be conceived of as static objects or texts” while pointing out the limitation when displaying the game in the museum space as static objects (Newman, 2012). The interactivity of the digital game has naturally positioned the game museum and their exhibition space to be significantly similar to the visitor-oriented contemporary museums. One of those examples is International Center for the History of Electronic Games (ICHEG) in Rochester USA, which is part of The National Museum of Play (also known as the “Strong Museum”)¹⁰. However, this interactivity inevitably conflicts with game museums’ motivation for preserving history, as it involves allowing the public visitors to touch and control the displayed museum objects.

It might be difficult to make the case for an archive or museum exhibition of video games that included no (playable) games, though we might consider whether this difficulty is reflective of extant expectations and taken-for-granted assumptions about the ways in which games reveal themselves... (Newman, 2011, p. 122).

As such, the existing studies indicate that the topic of game museum is in between the field of *digital game preservation* and the interactivity of the digital game, which appear to be in conflict with each other. Some artists and researchers are exploring ways to reveal the historical artifact in front of the visitors by emulating¹¹ or reconstructing, to go “beyond

⁸ <http://www.nvmusa.org/>

⁹ <https://themade.org/>

¹⁰ Strong Museum is a permanent museum dedicated to “play” – with a vast collection of toys, dolls, and other entertainment objects. Now the center became one of the biggest game archives in the world, with over 37,000 items.

¹¹ “In computing, an emulator is hardware or software that enables one computer system to behave like another computer system. An emulator typically enables the host system to run software or use peripheral devices designed for the guest system.” (“Emulator” in Wikipedia, 2019)

notion that games must play exactly as they once did either with the original hardware or reconstructed” (Swalwell, 2013, p. 1). However, the question of whether the emulation and reconstruction of retrogame is indeed a constructive and reliable long-term solution that satisfies both, the game as an emerging heritage and interactive media, remains unclear.

To summarize, the literature review indicates that discourses around the game museum phenomenon were often led with a focus on *digital game preservation* and game (or game-like) interactive display in the museums and science centers. The study of *digital game preservation*, alarmed by the obsolescence of digital games, is inspiring the gamers, collectors, and researchers to form communities, some of which successfully led to the establishments of permanent game museums. The demands for digital game preservation counter with the characteristic of game as interactive media. The phenomenon of game museums is still a new topic, and a comparative analysis on geographically distance game museums have not been conducted prior to this thesis.

Chapter 3. Methods: Visual Discourse Analysis and Comic-Based Research

This chapter focuses on the framework of the research methods used in this thesis. The thesis was conducted in qualitative multi-methods, linking: 1) Visual Discourse Analysis through analyzing the visuals, and 2) Comic-Based Research (CBR) through comic-making and the interaction with readers. The reason behind linking these two different methods into one thesis is primarily because of my passion being both researcher and comic artist. I wanted to find a solution to analyze the game museum phenomenon (visual discourse analysis) while supplementing that analysis also by using my very own artistic reflections (comic-based research).

For the visual discourse analysis, I have collected and analyzed the data from on-site observations in FMG and NCM and free dialogues with their curators. The data from the visual discourse analysis were then used in the CBR phase in scriptwriting and illustration of a webcomic. The response of the webcomic readers were documented and analyzed. The overall findings from visual discourse analysis phase as well as the CBR phases were then put together, compared and analyzed to arrive at a comprehensive conclusion. Figure 11 illustrates the concept on a high level.

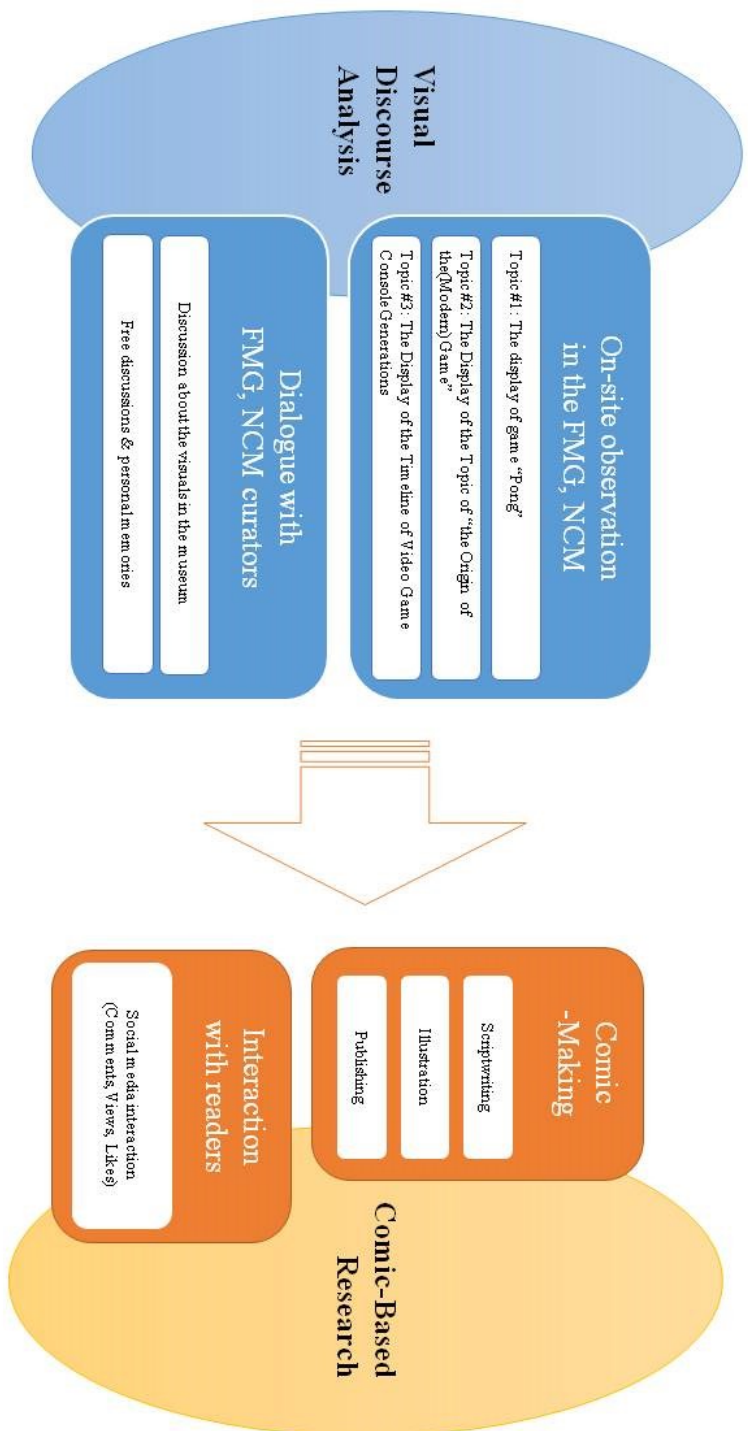


Figure 11 Methods used in this thesis

Visual Discourse Analysis

Background: Museum Studies

The study of museum discourse often involves with researching the discourses that saturate institutions and apparatuses to produce their subjects, as museums and galleries process the power to collect, conserve, to exhibit and to interpret the history (Alexander, 1979). Hooper-Greenhill explains the power of museum as follows:

The museum is a museological institution in which museum messages are created. (...) The museum message of the exhibition is realized only in the communication time and 'availability' of the exhibition to the audience (Hooper-Greenhill, 1992, p. 30).

Among various indicators, in this thesis, I have specifically concentrated on the visuals with a concentration of the museum message created by them. Visual Discourse Analysis concentrates on the documentation of what visual technologies of display are used in the institution; including – but not limited to – textural and visual technologies of interpretation (Rose, 2016, pp. 237-244). Analyzing the visual materials for discourse analysis is, according to Gillian Rose, to look into “(the) production by, and their reiteration of, particular institutions and their practices, and their production of particular human subjects” (Rose, 2016, p. 220). It begins with the acknowledgment of archives as “one sort of institution” (Rose, 2016, p. 228), and critically looking into what is shown, displayed, and classified – or what is not. (Hooper-Greenhill, 1992, p. 7). Game museum also has the power to choose and curate. Therefore, the Visual Discourse Analysis in this thesis aim to first acknowledge the displayed objects within the game museum space and then critically question those choices.

Comparing the FMG and NCM Spaces Through Observation and Dialogues

Among various practices to conduct a visual discourse analysis, I have concentrated on *on-site observation* and *dialogues* with the game museum curators. The on-site observation is a useful tool to investigate the current status of FMG and NCM, concentrating on what is shown in the museum space. This also allowed having dialogues with the curators which allow digging up the reasonings and dialogues on how those games are selected, or not selected, for the museum’s display.

The sessions of on-site observation were performed at NCM in 13-15th of October 2017, and 10th – 16th of January 2018 in FMG. Below are the questions that I have concentrated on during the *on-site observation* – following Rose’s guideline on how to investigate the visuals of the museum’s display (Rose, 2016).

- What is shown in the objects?
- Is it interactive or non-interactive?
- What is constructed (or decorated) around the objects?
- What relationship is established between the constructions (or decorations) with the artifact?
- How can the visitors find (or reach) the display in the exhibition space?

The findings of the on-site observation, with a concentration of above questions, were documented through photographs, notes, and sketches, an example of which is shown in Figure 12.

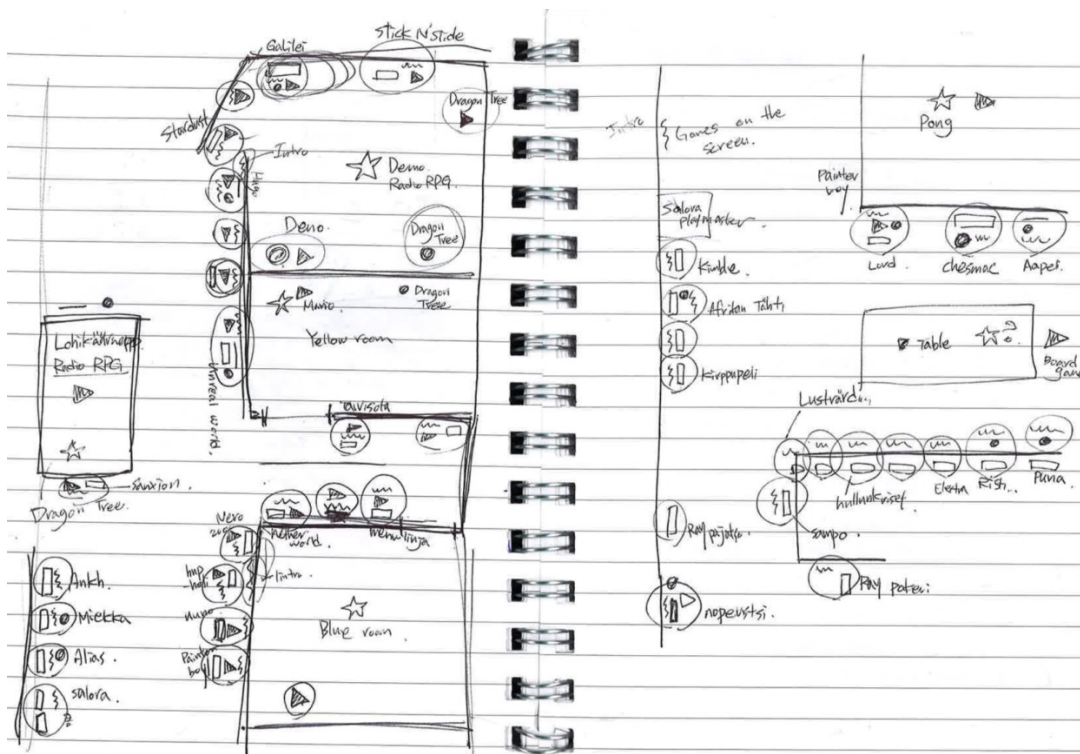


Figure 12 Example of note taken during the on-site observation in FMG

Free dialogues with the curators of NCM and FMG also provided valuable data for this thesis. The curators are, in a general sense, the persons who represent the space behind the museum exhibition and handle the classification schemes that structure how the public display areas are put into practice (Rose, 2016, p. 182). They are the individuals who create the exhibition, craft the museum message and interpret the selected museum material. Hooper-Greenhill describes the curator as “he/she articulates the exhibition space and contextualizes the museum reality” (Hooper-Greenhill, 2006, p. 31). The influence of curators is significant in game museums as the majority of them are, due to the museum’s short history, still likely to be the very founding members of the museum – as is the case for NCM and FMG. These curators are the ones who first drafted and classified the conservation policy, made the decision of which games to present in the permanent exhibition, and in what aesthetical way – along with the game museum’s establishment. Because of this, investigating the motivation of the museum’s curators provides vital clues of the cultural message that the museum seeks to deliver. The list of two (2) curators from each museum who participated in the dialogue for this thesis are as listed in the Table 1.

Table 1 List of curators collaborated to this thesis

Name	Role and Responsibilities	Achievements
Yunah Choi	Director & founding member of Nexon Computer Museum	Led NCM’s founding process Selected and curated the permanent exhibition in NCM.
Sang-Gon Woo	Archivist & founding member of Nexon Computer Museum	Established NCM’s conservation procedures and is currently a primary technician of the museum.
Niklas Nylund	Researcher & founding member of the Finnish Museum of Games	Led FMG’s founding procedures Wrote and curated the permanent exhibition in FMG.
Mikko Heinonen	Founding member of the Finnish Museum of Games	Led FMG’s founding procedures A primary donor and technical advisor to various displayed objects in FMG

The Topics for the Comparison

In order to compare the geographically distanced game museums and their choices of object and aesthetic expressions, it was essential to collect the research data cohesively and consistently between both FMG and NCM for a fair comparison. Also, it was necessary to

narrow down the scope of the samples, as all possible data collected within two permanent game museums is too broad to be analyzed in a single thesis. Therefore, I selected a total of three topics for comparison, structured around most commonly discussed historical events or concepts in the gaming history.

1. The display of the game “Pong,”
2. The display of the topic of “the origin of the (modern) game,” and
3. The display of the topic of “the timeline of video game console generations.”

The photographs, notes and sketches from the on-site observation were gathered and categorized around these three topics. During the conversation with the curators, I also combined the topic-specific questions to efficiently gather the curators’ thoughts and motivations behind the curatorial decisions. The table below summarizes the topics and the pre-assumption for each of these topics. Motivations and a detailed description of each topic are provided in the next paragraphs.

Table 2 Topic of comparison

No.	Topic	Pre-assumption
1	The display of the object, the game “Pong”	Identical choice of the object and aesthetical expressions
2	The display of the topic of “the origin of the (modern) game”	Different choice of object(s) but similar aesthetical expressions
3	The display of the topic of “the timeline of video game console generations”	Identical choice of object(s) but different aesthetical expressions

Topic #1: The Display of the Game “Pong”



Figure 13 The original Pong in-game screenshot¹²

The game “Pong” was initially released in 1972, developed and published by the American gaming company Atari. It is one of the few games that are displayed at both FMG and NCM. Comparing the aesthetical expression of Pong in FMG and NCM – looking for either similarities or differences – likely provides interesting insights of these two game museums. The pre-assumption is that the game would be displayed in quite a similar manner in both FMG and NCM as the object is a well-known game that is identical regardless of the regional differences.

The game is a two-dimensional sports game that simulates table tennis¹³ (see Figure 13) and is generally known as the first digital game to gain commercial success and reach mainstream popularity. It is thus considered as one of the iconic figures in the digital gaming history. Pong was initially released as a coin-operated arcade machine, often played at various commercial areas such as bars and supermarkets. After its huge commercial success, vast numbers of Pong games were released throughout the years; including Home Pong (1974) which allowed gamers to play Pong at home. In this thesis, in order to avoid confusion, both arcade Pong (1972) and Home Pong (1974) are generally referred to “Pong.”

¹² Wikipedia. Screenshot of PONG from the Atari Arcade Hits #1 software title released Hasbro Interactive - a conversion of the original 1972 Atari Pong. Image uploaded by Bumm13. The image is available in the public domain.

¹³ “Pong” Wikipedia, 2019

Topic #2: The Display of the Topic of “the Origin of the (Modern) Game”

In this part I anticipate looking into the choice of objects in FMG and NCM regarding the topic of ‘the origin of the (modern) game.’ This topic concentrates on whether the two museums have chosen the same or different objects for the same topic – and to investigate the reasons behind their choices. The pre-assumption is that FMG and NCM would have made a different choice in objects, but fairly similar aesthetical expression. The reasoning for this assumption is that the analytical separation of the concepts of game, play, and playfulness are from complex cultural constructs (Stenros, 2015, pp. 14-15). As such, there’s no ‘right answer’ to what is the ‘origin’ of the (modern) game, and it is one of the controversial topics amongst game historians and game ontologists, which likely reflects in the museums’ choice of presentation.

It is a general belief in the European academic scene that the study of the game is the study of both digital and non-digital game system (Waern, 2012, p. 3). This perspective concentrates on the structure, interaction, and rules of the game to identify what makes the game different from play. Game ontologist Jesper Juul detailed the concept of the game as (Juul, 2011):

- A rule-based formal system
- With variable and quantifiable outcomes
- Where different outcomes are assigned different values
- Where the player exerts effort in order to influence the outcome
- Where the player feels emotionally attached to the outcome
- Where the consequences of the activity are optional and negotiable

But the same concept is understood differently across the earth, like in the Korean language and its interpretation of the word “게임 (gae-im)” –which I have briefly described in the prologue of this thesis. Due to a lack of corresponding vocabulary to fully translate the English term “game,” Koreans naturally adopted a loan word from English, but with a liberal interpretation¹⁴. Unlike English the word “gae-im” is often conceptualized, in both academics and mainstream media, as a digital game and digital game *only* – it is considered something

¹⁴ The Korean language is one of the most difficult languages for native English speakers to learn, and vice versa. The Foreign Service Institute (FSI) categorized Korean as level 5 (out of the scale of 1-5) which requires minimum of 88 weeks (2200 hours) for native English speakers to reach proficiency in speaking and reading. Due to this reason, translating between these two languages often involves a liberal approach, as literal interpretation are difficult.

that was imported from Western society, sometime during the post-colonial era, separated from traditional play “놀이(Nori)”. A statement from South Korean game researcher Kyum-Seop Kim, in literal translation, “Digital ‘gae-im’ is, in fact, a part of a bigger concept of game (or play).” (Kim, 2012, p. 112) reflects this translational confusion.

Therefore, the pre-assumption for this topic is that FMG and NCM have likely selected different objects to display the topic of ‘the origin of the (modern) game’ but with a similar approach for sthetical expression that represents old and traditional value.

Topic #3: The Display of the Timeline of Video Game Console Generations

A video game console is a computer device that outputs a video signal or visual image to display a video game that one or more people can play¹⁵. The timeline of video game consoles, or commonly known as ‘video game console generations,’ is the historical categorization that is commonly accepted by both gamers and historians. Since the 1970s, gamers have classified and categorized video game consoles in chronological order, denoting “generations” depending on the hardware performances, publisher, release year and target market. Figure 14 gives an overview of this timeline. This became a universal classification amongst both the gaming industry and academics. While Topic #2 (the origin of the modern game) compares the two game museums’ choices on concept with unique cultural interpretations, Topic #3 is concerned with the institutions’ interpretation of a universally accepted historical indicator. So the pre-assumption is that both FMG and NCM would display an identical choice of objects but may have a different aesthetical expression – this might be a unique color scheme and interactivity.

¹⁵ “Video game console” Wikipedia, 2019

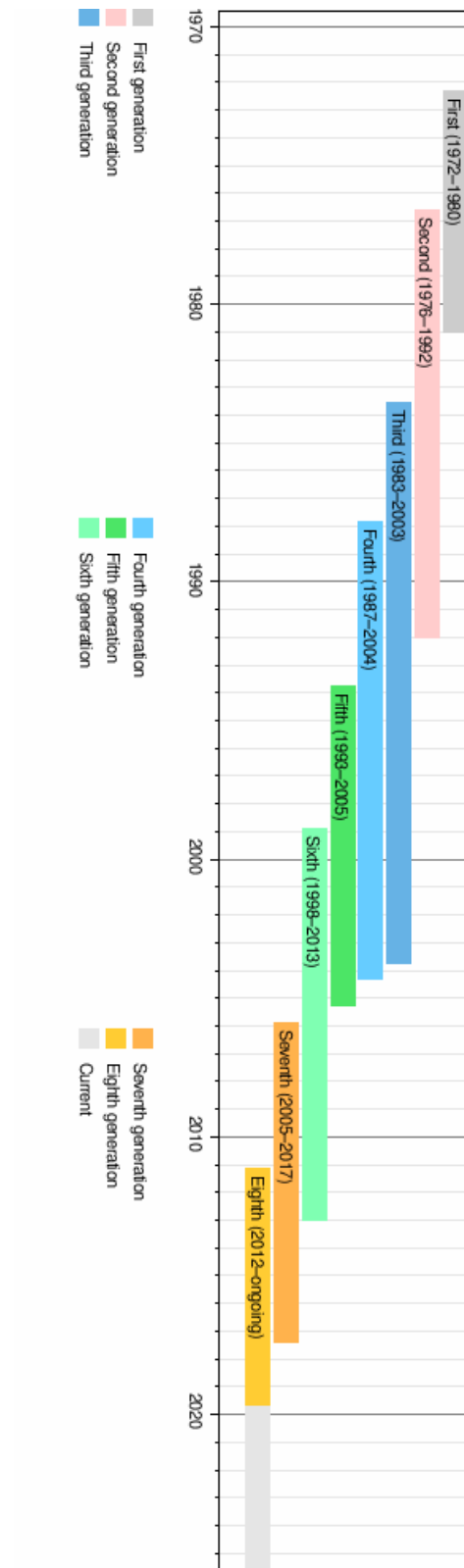


Figure 14 The timeline of video game consoles in the chart¹⁶

¹⁶ "Video Game Console" Wikipedia, 2019

Comic-Based Research

The data collected through discourse analysis were then processed for further analysis by use of CBR (Comic-Based Research); implementing a comic-making process and engaging with the readers as part of the thesis research. The reason why I have chosen CBR was mostly based on my artistic expertise - my experience and skillsets in comic-making. The idea to make use of CBR gradually grew while I was interacting with the curators at FMG and NCM during the research. From there, I have decided to create a webcomic series solely dedicated to this thesis, hoping to look deeper into the museums' cultural message through visualization, and ultimately familiarizing myself with this recently introduced research method.

Background for Comic-Based Research

CBR is one of the subsidiary manifestations of the Art-Based Research (ABR) methodology, a transdisciplinary approach that “combines the tenets of the creative arts in research contexts” (Leavy, 2018, p. 3). In the process of designing the method for this thesis I came to acknowledge my interest in using the art-making process, along with the interaction and the participation of the readers, as part of the research process. This naturally led to my choice of ABR; as the method of ABR concentrates on using the arts as a foundation for creating expressive forms that enlighten (Barone, 2011, p. 21).

(ABR is) *Effective to describe, explore, or discover, or that require attention to processes* (Leavy, 2018, p. 9).

Various artistic tools can be used in ABR, with vast examples from the literary forms (essays, short stories, novellas, novels, experimental writing, scripts, screenplays, poetry, parables); performative forms (music, songs, dance, creative movement, theatre); “visual art (photography, drawing, painting, collage, installation art, three-dimensional (3-D) art, sculpture, comics, quilts, needlework); audiovisual forms (film, video); multimedia forms (graphic novels), and multimethod forms (combining two or more art forms)” (Leavy, 2018, p. 3). Among these, CBR is a broad set of practices that use the comics form to collect, analyze, and disseminate scholarly research (Kuttner, Sousanis, & Weaver-Hightower, 2017, p. 397). For me, drawings of a caricature and comic figures of my life, friends and families, society and the surroundings were part of my life for many years. Therefore, comic making (from scriptwriting to illustration) has always been my tool for *learning* and *self-expressing*.

Therefore, it was natural for me to be drawn by the explorative and new research approach of CBR.

A comic is, as described by critically acclaimed comic artist and researcher Scott McCloud, “juxtaposed pictorial and other images in deliberate sequence, intended to convey information and to produce an aesthetic response in the viewer” (McCloud, 1993, p. 9). Moreover, comics have been widely and effectively used to promote learning and understanding (Short, Randolph-Seng, & McKenny, 2013; Syma & Weiner, 2013; Kuttner, Sousanis, & Weaver-Hightower, 2017; Nalu & Bliss, 2011). From there, CBR is a combination of a range of disciplinary, methodological, and epistemological approaches that aim to refine, define and therefore enhance various artistic and academic uses of this medium (Kuttner, Sousanis, & Weaver-Hightower, 2017, p. 401). CBR researchers point out that their experiences of the process of making comics also served as a form of analysis – a practical, flexible form for communicating research findings and concepts to a wide audience; making CBR particularly useful for narrative approaches to research (Kuttner, Sousanis, & Weaver-Hightower, 2017, pp. 397-398). One of the widely known examples of CBR is the works of Prof. Nick Sousanis and his Ph.D. dissertation *Unflattening* (2014). His work, which is set in a comic form of the academic research paper, is an experiment of visual thinking, an inquiry into the ways of how humans construct knowledge.

Comic Making in this Thesis

I have developed a webcomic series titled “A Brief History of Digital Play: Season 3” solely for this thesis research, both in English and Korean language. Figure 15 shows an excerpt of one of the comics in both languages as an example. Photographs, notes, and sketches gathered during the on-site observations and dialogues with the curators were used as a resource. The curators from NCM and FMG were both aware that the contents of the museum exhibitions and their stories will be illustrated as a comic and published for general audiences. During the comic-making process, I have concentrated on condensing the data into visual storytelling, turning exhibition contents in FMG and NCM into enjoyable narrative. Gradually and naturally, the process of comic making allowed me to critically think and rethink the exhibitions of FMG and NCM – revealing the messages beneath the surface of the museum space.



Figure 15 A partial screenshot of “A Brief History of Digital Play: Season 3” episode no.1, in English (right) and Korean (left) – ‘introducing NCM and FMG.’

Interaction With the Readers

The webcomic “A Brief History of Digital Play: Season 3” was published bi-weekly through online social media platforms Facebook and Tapas. Prior to this thesis research, previous series of “A Brief History of Digital Play” (Seasons 1 and 2), which concentrated on introducing the historical digital games and computers, have accumulated online subscribers over two years. As of January 2018, just before the thesis research began, the comic already had a total of 551 subscribers. These accumulated subscribers became the primary readers of “A Brief History of Digital Play: Season 3.” I have also considered these 551 online subscribers as a potential FMG and NCM visitors; for those who showed constant interest in

the history of games, would likely be keen to visit the game museum – but may not yet do so due to geographical distance.

Both online social media platforms, Facebook and Tapas, allow the readers to comment, share and “like” the comic, giving them opportunity to show their interest and thoughts freely. I have compared these “comments” from my comic readers with the objects in FMG and NCM to understand the potential museum visitor’s expectation towards a game museum. I also reflected on the readers’ responses to previous comics while creating the next episodes on a bi-weekly basis – which enables the participatory aspect of Comic-Based Research. Later I have also employed a quantitative method and collected simple statistics of the views, shares, and likes for each episode to observe differences in trends. However, I have not profiled the comic readers (for example, their gender and age) as those information are likely not critical for this thesis. To conclude this chapter, Figure 16 illustrates the methodology employed in this thesis in a visual form – as a comic.

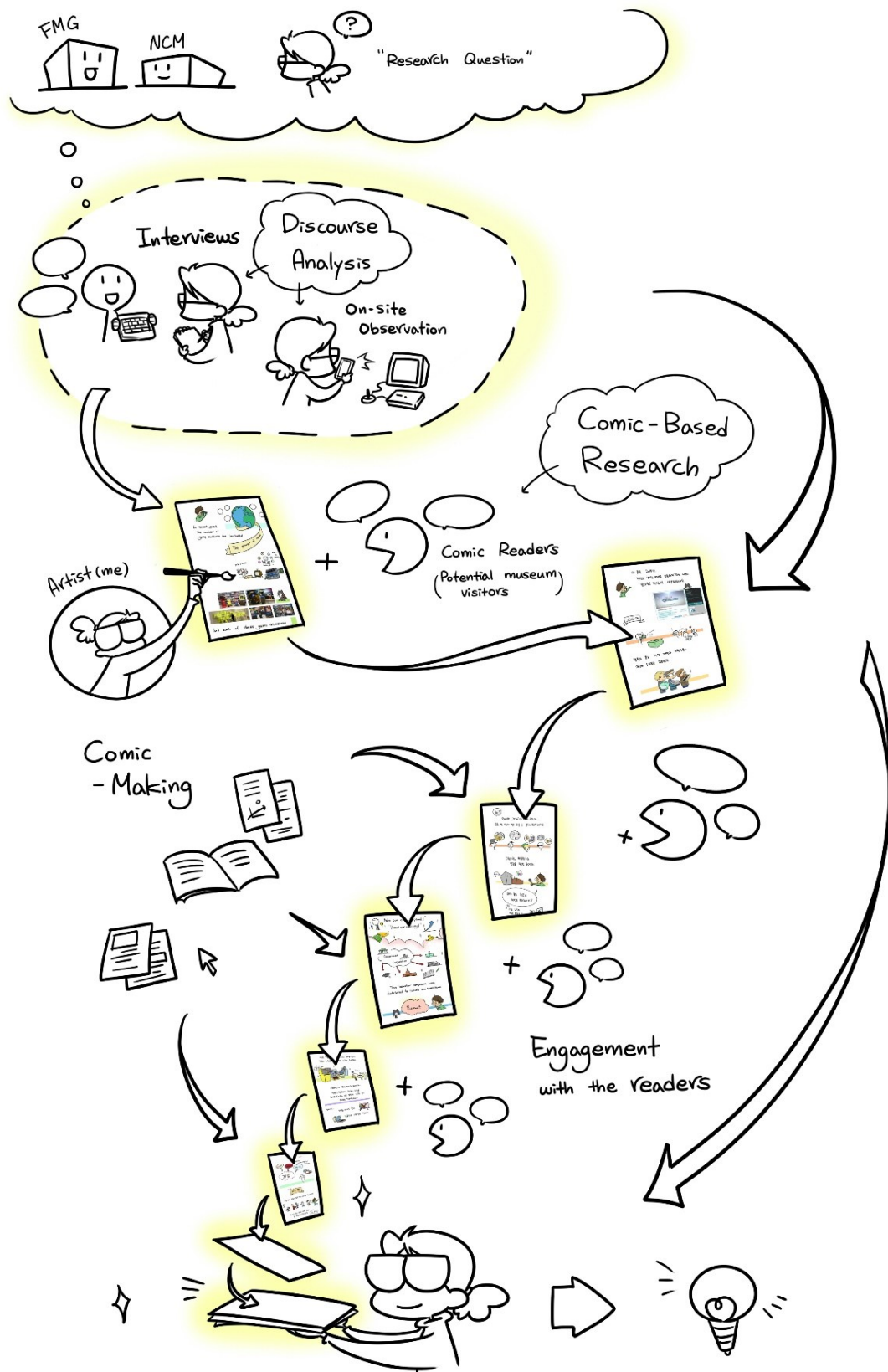


Figure 16 My artistic representation, in comic format, of the methodology used in this thesis

Chapter 4. Research Observations, Findings, and Results

Stepping Into the Museum Space

This chapter presents the findings gathered during the Visual Discourse Analysis phase, conducted via on-site observations and dialogues. According to the methods described in the previous chapter, data were gathered for three distinct topics of comparison which I will separately discuss in the following.

Topic #1: The Display of the Game “Pong”

In this chapter I have analyzed the choice of aesthetical expression between FMG and NCM by comparing how they display the identical object of the game “Pong”.

As discussed in Chapter 4, the game Pong is one of the iconic figures of the modern digital gaming industry. Both NCM and FMG are using a significant amount of museum space to display the game – as well as the museums’ marketing flyer, website, and press releases.

Developed by Atari in 1972, Pong is known for its critical role on video game history as well as its influence on mainstream popular culture. (...) The market success of Pong-inspired the birth of the video game industry and its culture. (Nexon Computer Museum, 2018)

In NCM, the game Pong is displayed in the front corner of the B1 floor “Special Stage” exhibition, a space that is dedicated to “critically acclaimed arcade games¹⁷ – the games that still (..) inspire people’s passion and imagination.” (Nexon Computer Museum, 2018) The exhibition space is constructed in a way to resemble Korean arcade stores from the 1980s, with dim light, dark and secretive atmosphere as shown in Figure 17 and 18. The exhibition room in NCM is able to accommodate up to 50 people at once, and often various arcade game events for the public are held during weekends and holiday seasons. Most of the games that are being displayed in “Special Stage” are available to be played freely during the

¹⁷ An arcade game or coin-op is a coin-operated entertainment machine typically installed in public businesses such as restaurants, bars and amusement arcades (Wikipedia, 2019).

museum's opening hours. However, the game Pong is available to play only during a designated time, under supervision of the museum staff. NCM Choi explained that this was mainly due to assure the safety of the object. "It is inevitable decision" she claimed, that the museum must place a stationary personnel next to Pong in order to keep away the visitors who might break the game controller. (Y. Choi, personal communication, 13 Oct 2017)

Curators of NCM said that they had no experience of playing or seeing Pong in the 1970s. Because the original Pong game did not reach Korean market in the early days. Yunah Choi, the director of NCM, explained that she never played Pong when she was young, but only much later in her lifetime. She also expressed a lack of a historical record of Korean gaming culture between the 1960s to 1970s. The purpose of displaying the game Pong, for her, was not about nostalgia but to "remember (honor) the innovations and imaginations of early game developers and the birth of the digital game industry". She also described that the economic and social success of those founders of Nexon is "the greatest success story of the Korean entertainment industry" (Y. Choi, personal communication, 13 Oct 2017). Also, because there was no original Pong arcade machine imported or manufactured in Korea at the time, it was an inevitable choice for NCM to display the game with a reconstructed replica. However, the replication is quite different from the original arcade. Its monitor and control panel – the hardware of the object – are much wider and advanced, its game software is being emulated on a Microsoft Windows operating system-based PC. Only the silver-colored rounded shape game control panel, which visitors of NCM can touch and interact with, are loosely resembling the historical artifact. Figure 19 compares original controller and the museum's replica.



Figure 17 Pong displayed at B1 exhibition area in NCM



Figure 18 Surroundings of Pong exhibition in NCM



Figure 19 The original Pong arcade control panel¹⁸ (top) and the Pong arcade control panel in NCM (bottom)

FMG is displaying the home version Pong (commonly known as “Home Pong”) from the early 1980s inside their “Game Room” area. The reason behind this choice of objects was that, like Korea, the arcade version of Pong did not reach Finnish mainstream during the 1970s. However, Home Pong received wide popularity amongst Finnish households in the early 1980s. In contrast to NCM, the game Pong is freely available for the public to play anytime during the museum’s opening hours without the presence of on-site staff. The visitors can also touch and use all Christmas-themed decorations surrounding the game device and TV, without any special instructions.

The simple tennis game Pong was the first successful coin-operated digital game. (...) Pelikonepeijoonit purchased the machine in a very poor condition, and it has been restored with the help of funds from the crowdfunding campaign for the Finnish Museum of Games. (Vapriikki, 2018)

The display of Pong in FMG is concentrated on reviving the warm and bright atmosphere, decorated with various Finnish household items from the 1970s to early 1980s (shown in Figures 20 – 22). Most of these surrounding installments has little to no relation with the gameplay of Pong itself; Christmas cards, Christmas tree, Santa Claus figures, Finnish cooking books, phone books, wooden TV shelves, sports cards and flags. The only correlation

¹⁸ Photo from Wikipedia, 2019

between these decorations with Pong is the fact that they are both from the late 1970s to mid-1980s. Niklas Nylund, the researcher of FMG, explained that the choice of these surrounding decorations was a “natural process” for him and other founding members who were involved in curation and exhibition design, as it was based on how they “remember Pong from childhood” (N. Nylund, personal communication, 10 January, 2018). This feeling of nostalgia was also observed during the on-site observation, when the museum staff of FMG introduced some of those installments, especially the Finnish cooking card set, as ‘the most Finnish household item you can find’ and how much it resembles ‘the old days’.



Figure 20 Pong exhibition at FMG



Figure 21 Surroundings of Pong exhibition in FMG



Figure 22 Finnish cooking book and phone number books, displayed next to the Pong game in FMG.

The findings above show how much NCM and FMG differently display the identical object Pong. This indicates that game museums have a diverse perspective on interpreting identical historic events. In NCM, the game Pong is displayed in reconstructed form, separated from other surrounding objects. The replicated game Pong has little visual resemblance with the original game machine. The curators of NCM were not emotionally attached to the game Pong, with little to no experience or knowledge about the game during their childhood. They have decided to display the game in the exhibition due to the game's worldwide commercial success outside of Korea. In FMG, the curators had personal attachments, a sense of nostalgia, and self reflection through the game Pong (Home Pong, specifically). They have consequently decided to decorate the exhibition with various items, based on how the Finnish household must have looked like in the late-1970s to early-1980s, according to their personal memories on the past.

Topic #2: The Display of the Topic of “the Origin of the(Modern) Game”

To answer this question, I looked into what objects FMG and NCM chose to represent the origin of the (modern) game.

The object representing the origin of the modern game chosen by NCM is the Apple I computer. First released in 1976 in the USA, each handcrafted by Steve Wozniak and Steve Jobs, the Apple I computer is regarded as one of the first personal computers to support keyboard input and video output. (Nexon Computer Museum, 2014) The description and photographs of the Apple I computer are widely exposed in NCM’s website, publications and press releases, described as the most important and highlighted artifact in their collection.¹⁹

Figure 23 is one of the photographs that NCM uses to promote the artifact. Acquired from a Sotheby's auction in the 15th June 2012, NCM describes their Apple I computer collection as “the most expensive and therefore precious artifact” (Y. Choi, personal communication, 13 Oct 2017).



Figure 23 Apple I computer archived in NCM

The Apple I computer is located at NCM’s 1st-floor exhibition “Welcome Stage.” To understand how the Apple I computer is displayed in NCM, we first need to look into the overall layout of this exhibition. The “Welcome Stage” has the secondary title “Computer as Theatre” which was named after Brenda Laurel’s book *Computer as Theatre* (Laurel, 1993) as the book inspired curator Choi and her exhibition team for the design of the exhibition layout (Y. Choi, personal communication, 13 Oct 2017). It is segmented into five different zones; the input & output zone, the graphics zone, the CPU zone, the sound zone, and the

¹⁹ According to the descriptions on NCM website, social media and on-site flyers.

internet (network) zone – each representing the core functions of digital computers²⁰, marked with white lines and text on the floor as shown in Figure 24. The “Welcome Stage” exhibition space begins with a tunnel (see Figure 26) after which the first section of the exhibition to welcome the visitors is the *input & output zone*. The zone is composed of various displays of keyboards and computer mice, as well as two interactive exhibits; a facial recognition system and a virtual laser keyboard, both of which are freely available for visitors to interact with – as it shown in Figure 25. According to NCM, it was purposely placed there to provide a “strong first impression of the museum experience” to the visitors (S. Woo, personal communication, 13 October, 2017).

The position of the Apple I computer display in NCM, however, appears oddly disconnected from the visitor’s flow. The visitors must turn to the opposite direction from the highly interactive display objects (the input zone, and its facial recognition and virtual keyboard) in order to observe the Apple I computer. As shown in Figure 27, the computer is in a fixed glass container, thus untouchable and non-interactive. The computer is also not part of any *zone*; but located on the edge between the *input & output zone* and the *CPU zone*, isolated from both sides. Another interesting observation is the loose connection between the Apple I computer with the history of the digital game. The Apple I computer is indeed capable of operating simple digital games from the 1970s, but it is generally regarded as a multi-purpose computer for personal use and mass distribution, not a dedicated gaming device; which is also addressed by NCM’s own museum book “Computer, an Idea that Changed the World.” (Nexon Computer Museum, 2014) There is also no historical evidence that the Apple I was imported to Korea or even operated by Korean before it was acquired by NCM.

Curators of NCM also said that the process of Apple I computer’s acquisition was more of a strategical choice, rather than obtaining historical evidence. The choice of Apple I computer was part of the NCM’s effort to distance the museum from South Korea’s sociopolitical criticism towards *digital game addiction*. NCM curators were concerned that the topic of digital game addiction is one of the most highly controversial discourses among South Korean academia. The criticism eventually led to the enactment of the “Shutdown Law”²¹ in

²⁰ Each zone and its installation layout was originally planed and designed by the IT preservation department of NCM, a group of former game developers, museum archivists, researchers and exhibition architects.

²¹ Effective since 2011, The Youth Protection Revision Act (henceforth, “Shutdown Law”) of South Korea forbids children under the age of sixteen to play online video games between the hours of 00:00 and 06:00. It led to a highly debated controversy, as the enforcement of the law inevitably requires corporations and authorities to collect private information of online game users.

the year 2011, just prior to the time when NCM's establishment project was under its way. Inevitably the founding process of NCM and its exhibition design process was influenced by this new legislation (Y. Choi, personal communication, 13 Oct 2017). In 22012, NCM acquired the original Apple I computer and confirmed the museum's name as Nexon 'Computer' Museum, despite the fact that the museum's primary collections are digital game devices and software. Nexon, the South Korean game publishing company as well as the sponsor of NCM, and the museum's founding executives expected that this decision would help NCM "not being undervalued or neglected from the public and academic" and therefore "truly be able to showcase the value of the digital game" (Y. Choi, personal communication, 13 Oct 2017).



Figure 24 Zone markings on the "Welcome Stage"

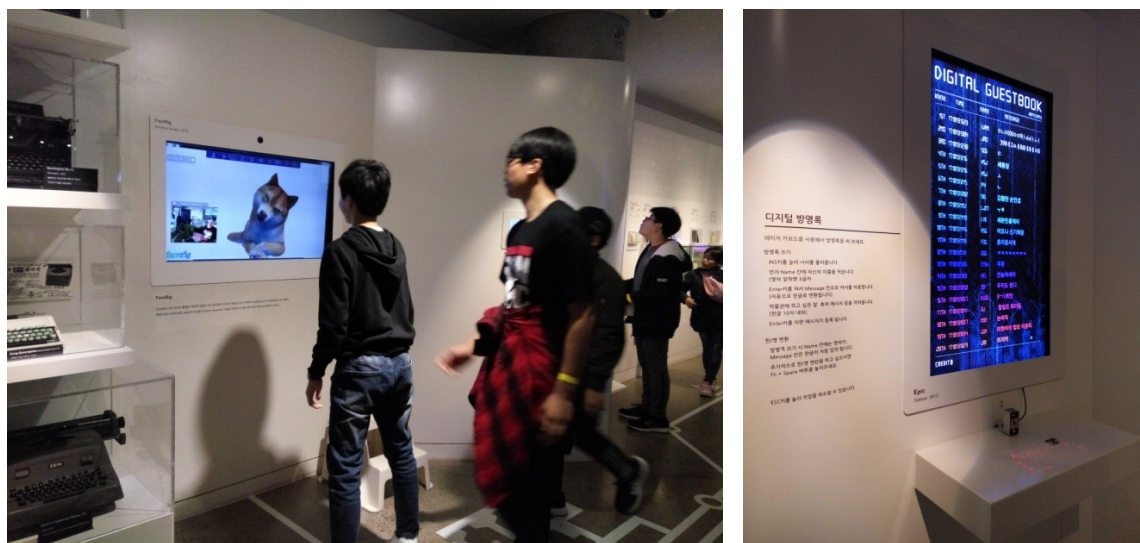


Figure 25 A group of young visitors is experiencing the facial recognition system and the virtual laser keyboard demo at the 1st-floor exhibition area in NCM

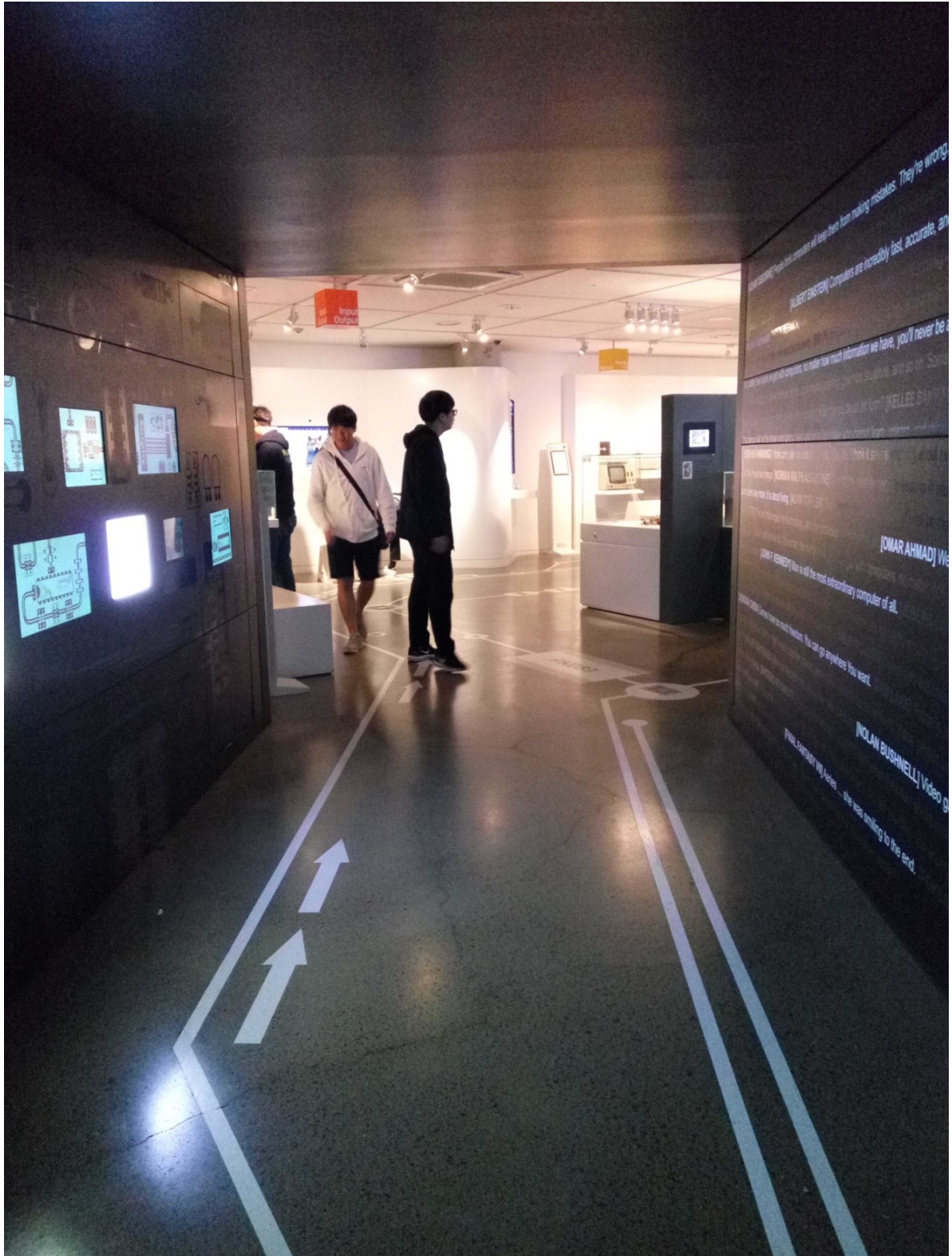


Figure 26 The entrance tunnel of NCM - 1st-floor “Welcome Stage” exhibition area.

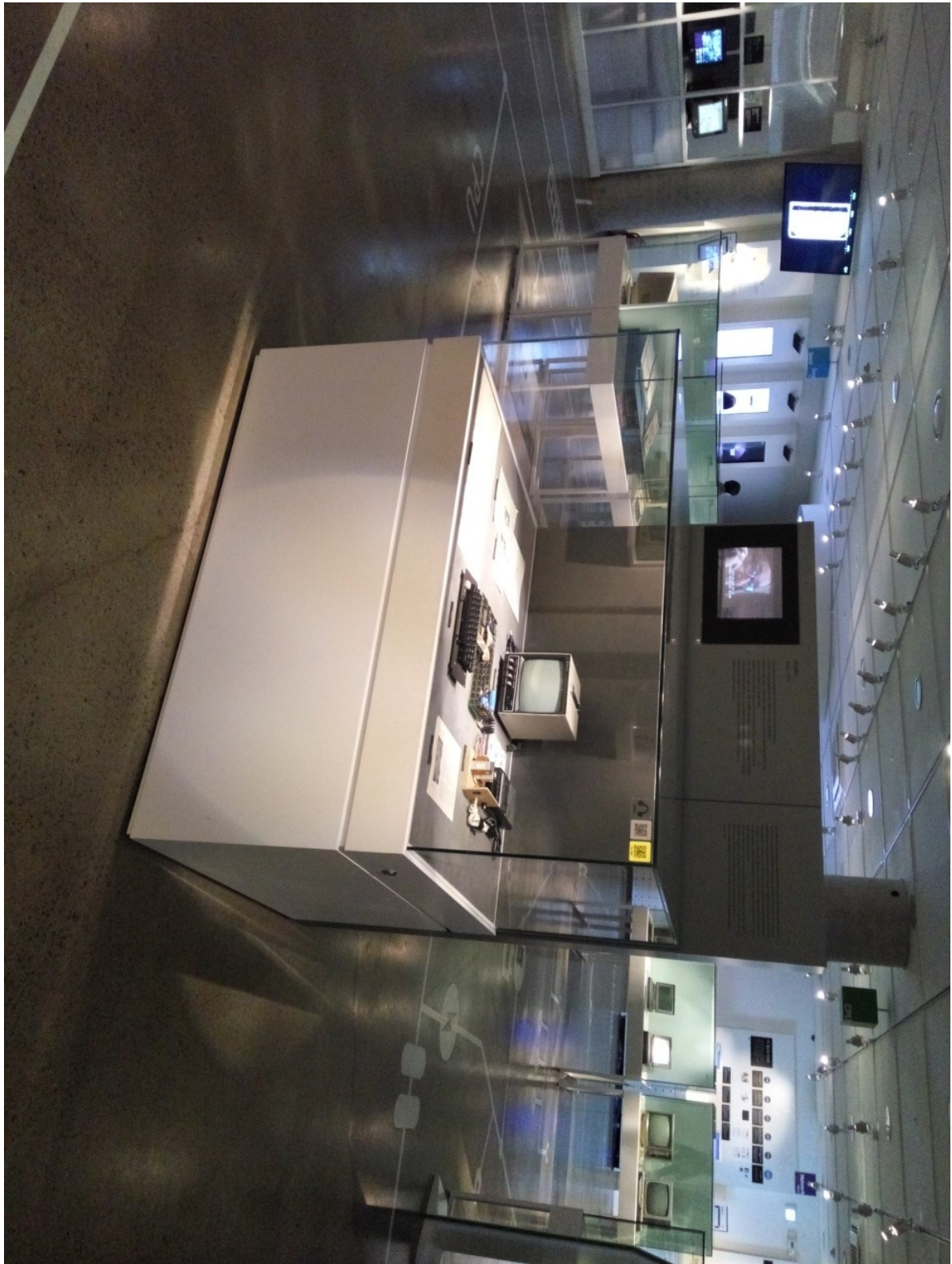


Figure 27 Apple I computer in “Welcome Stage”

Compared to NCM with its several stages, FMG has only one exhibition as a total which is displayed in a linear structure – the visitors can only move in one direction. The flow of the exhibition is chronologically inversed, with the artifacts near the entrance being more recent and older games being in the later parts of the exhibition. FMG’s choice of object to display the origin of the (modern) game therefore is the last artifact displayed the exhibition space. It is the board game “Lustfärd till Aavasaksa (*Huvimatka Aavasaksaan* in Finnish, *Pleasure Trip to Avasaksa* in English)” released in 1862²², a picture of which is shown in Figure 28. The game is set in various geographical regions in Finland involving stories and simple dice throwing-based rules.



Figure 28 Lustfärd till Avasaka and its guide book²³

Niklas Nylund, the researcher of FMG, explained that Lustfärd till Avasaksa is one of the oldest objects that they have and considered as “the ‘origin’ and therefore ‘conclusion’ part of the entire exhibition” which visitors must go through in order to exit FMG (N. Nylund, personal communication, 10 January, 2018). The game is displayed inside a solid casing and non-interactively (see Figure 29). There are also several other artifacts displayed next to Lustfärd till Avasaksa, also all sealed in brown colored wall cases. All of these neighboring artifacts are, like Lustfärd till Avasaksa, from Finland and have close ties with Finnish history and traditions – for example, the board game “Sampo” (1904), a game based written around one of the most popularly known Finnish epics. The casing of Lustfärd till Avasaksa and these early Finnish board games are decorated with several paintings which appear to be

²² The game was made in Finland and was illustrated by Swedish-Finnish artist Hilda Olson and therefore more known by its Swedish title. The game archived and displayed in FMG is the Swedish edition of the game.

²³ Photograph from Wikipedia, 2019

also from 18th to 19th century Finland as shown in Figures 30 and 31. All of these objects are non-interactive.

Nylund described this area as evidence of “how the game is becoming understood by the Finnish society.” For him, the exhibition of Pong and Lustfärd till Avasaksa is one of the evidence that “proves that the game has been with us all along – and how many of us grew up playing games” (N. Nylund, personal communication, 10 January, 2018). He addressed that gaming culture was not accepted in the mainstream Finnish society in the Commodore era – from the mid-1980s to early 1990s – but rather uncommon and “rebellious”. However, “with a recent effort from both academic and public sectors,” Finland began to recognize the game as both a positive economic and cultural phenomenon (N. Nylund, personal communication, 10 January, 2018). Mikko Heinonen, one of the founding members of FMG, described how the city of Tampere and *Suomi100*²⁴, contributed to the establishment of FMG. According to Heinonen, FMG’s founding process traces back to the year 1999, when three private game collectors, Mikko Heinonen, Ville-Vieikko Heinonen, and Manu Pärssinen, launched the Pelikoneoeijoonit website (M. Heinonen, personal communication, 10 January, 2018). Their efforts attracted temporary (short-term) exhibitions in trade fairs. The exhibition later collaborated also with the Game Research Lab of Tampere (at the University of Tampere) in 2012. They began to discuss initiating a crowdfunding project to make a permanent exhibition of games. “Then we got in touch with the deputy of the city of Tampere,” he said, “who also turned out to be a fan of games” (M. Heinonen, personal communication, 10 January, 2018). From there, as Heinonen recalls, the founding process of FMG escalated from a small goal to make a permanent exhibition of games into a municipality-scale project of creating a permanent museum and collection about Finland's game history (M. Heinonen, personal communication, 10 January, 2018). In 2014, the FMG project design team²⁵ initiated the crowdfunding page for the FMG and within six months successfully gathered 1,100 backers with a total of 85,860 EUR (Suominen, Sivula, & Garda, August 2018). Major Finnish game companies also stepped in as contributors, as well as public funds granted by the City of Tampere’s Museum Services and the Avoim Tampere Program (N. Nylund, personal communication, 10 January, 2018). As such, FMG’s founding process involved various collaborations with the public sector and the national Suomi 100 event.

²⁴ A nation-wide public events happened in Finland around the year of 2017, to celebrate the 100th anniversary of Finnish independence.

²⁵ Mikko Heinonen, Ville-Vieikko Heinonen, Manu Pärssinen, Outi Penninkangas, Annakaisa Kultima, Tuija Lindén and Niklas Nylund

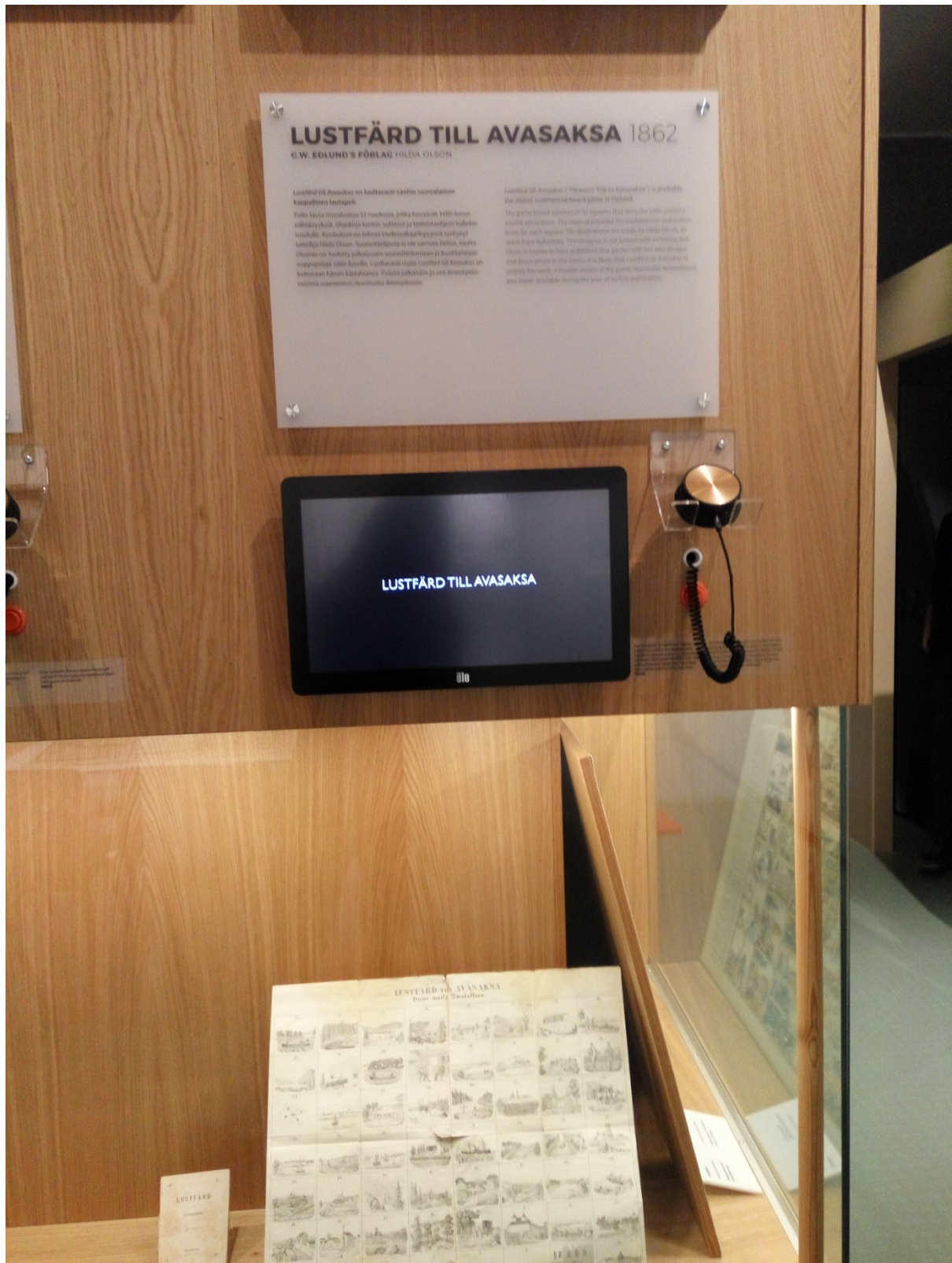


Figure 29 The display of Lustfärd till Avasaksa and description.



Figure 30 The display area of early board games from Finland.

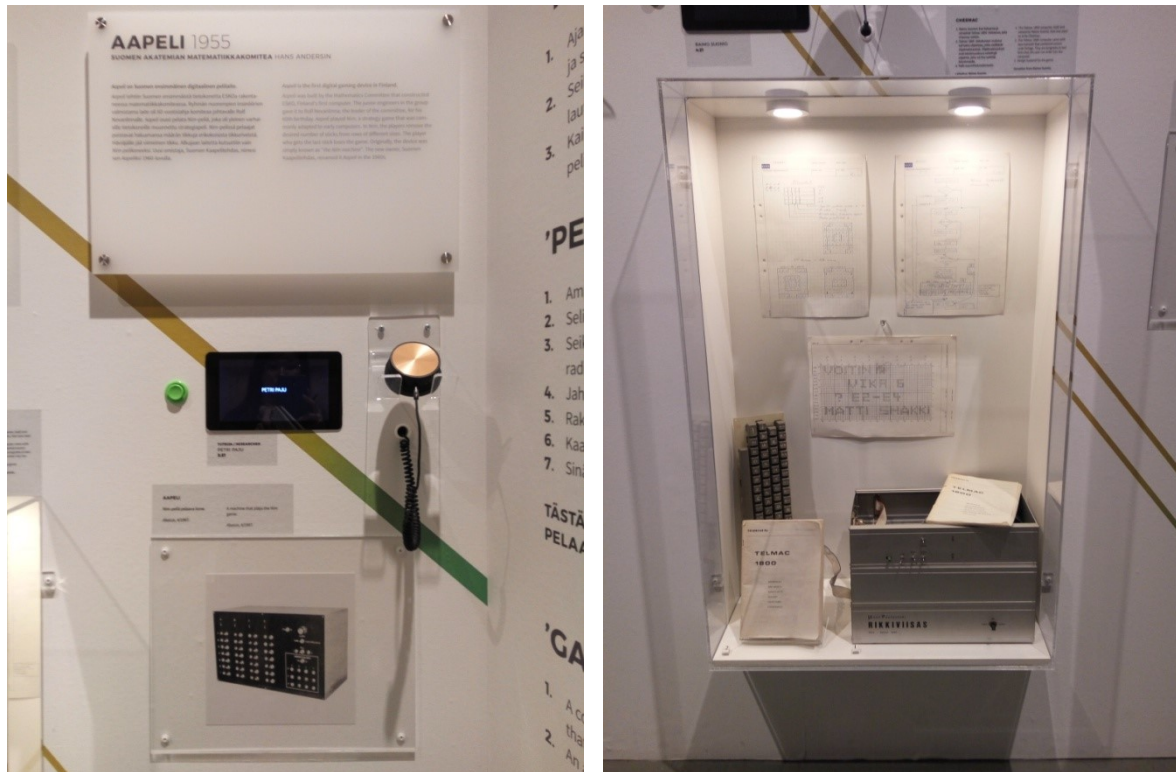


Figure 31 The display of Aapele (left) and Chesmac (right), displayed in plain white casings. Both are one of the first digital gaming devices from Finland.

To summarize, the findings from FMG and NCM display of the topic ‘the origin of the modern game’ reflect that sociopolitical events do influence the choice of objects in the game museums.

In NCM, the Apple I computer is displayed as the critical figure of the beginning of the (modern) game and thus the most valuable objects within the museum collection. However, the display technique of the Apple I computer is positioned away from the main visitor flow – separated from other surrounding interactive objects. The legislation from 2011 that regulates digital games and occurred just around the time of NCM’s establishment, influenced the museum’s strategical choice of objects greatly. The curators of NCM strategically named the museum a ‘computer museum’ and placed the multi-purpose personal computer the Apple I as their primary object – instead of gaming-purpose devices or software.

In FMG, a group of Finnish board games, old paintings, and other decorative figures represent the origin of games. The museum’s correlation with the national project of celebrating *Suomi 100* (the 100th anniversary of Finnish independence) during its establishment influenced the FMG’s primary choices of objects and aesthetical expression. Consequently, the museum is concentrating on the Finnish nationality; games that were

played or developed by Finnish people. I have also noticed that FMG curators were keen on expressing their thoughts about the positive aspects of gaming culture in Finnish society. They also show a deep appreciation towards Finnish government, companies and people who engaged with the museum's founding process and were eager to link the modern digital games with Finland's traditional board games.

Topic #3: The Display of the Timeline of Video Game Console Generations

For this section, I looked into how FMG and NCM are displaying the concept of video game console generations – also known as “the timeline of video game consoles,” which is a universally accepted historical categorization amongst game fans and researchers. Both NCM and FMG are displaying the timeline of video game consoles, with a similar set of objects. However, the way they address the interactivity showed unique characteristics of these museums.

The timeline of video game consoles in NCM is at the 2nd-floor exhibition area “Open Stage: NCM Library.” As it describes, the area is an open library format with bookshelves and desks, with hundreds of game cartridges, CDs and package boxes, game magazines, and console machines. Most of these objects were acquired or donated by Korean collectors, including the very founding members of NCM and Nexon (S. Woo, personal communication, 13 October, 2017).

As part of Nexon Computer Museum's preservation project, NCM Library archives all game-related experiences with a vast collection of retro home video consoles (...) the library offers a wide range of multiple acquired gaming devices open for visitors to play. (Nexon Computer Museum, 2018)

A total of seven video game consoles and one gaming PC are available for visitors to play; each one representing a generation of video game console machines from first generation (1972-1979) to seventh-generation (2005–2012), and network-based gaming platforms from the mid-2000s. One of their examples of displaying the console is shown in Figure 32. Each of these video game devices are playable with 5~10 video game titles each, while the remaining collection is kept secured inside glass cases (Figure 33). Archivist Woo from NCM explained that he regularly updates those playable 5~10 game titles at least once in

every quarter. The selection process of these game titles is managed by the curating team, under the supervision of the museum director (S. Woo, personal communication, 13 October, 2017). He also described that the selection process of these playable game titles is first guided by his “personal memories and interests” while the supervision is somewhat concerning “museum branding and public relations; making sure that it does not discriminate or touch any sensitive topics” (S. Woo, personal communication, 13 October, 2017). NCM also tries to ensure both interactivity and historic conservation in the “Open Stage: NCM Library.” Their archive policy, drafted by Woo and other conservatory staffs in NCM, specifies that playable game consoles and cartridges in the “Open Stage: NCM Library” must have at least one copy stored in the museum storage – making sure that at least one original copy of the game software and hardware is secure. For NCM, this is “to ensure the museum’s role as a historical institution” (S. Woo, personal communication, 13 October, 2017). NCM is also making sure that there are at least 1-2 on-site staff stationary in the “Open Stage: NCM Library” area during opening hours, assuring the safety and condition of the interactive hardware. These on-site staffs are also responsible for providing verbal instructions and help to visitors. For example, guiding young visitors on how to operate three-decades-old game cartridges. During the on-site observation, visitors tended to play the games in multiplayer (see Figure 34) and expressed that the representation of the timeline of video game consoles in NCM reminds them of “going to PC-room (or *PC-bang* in Korean²⁶) together with friends” during their childhood.

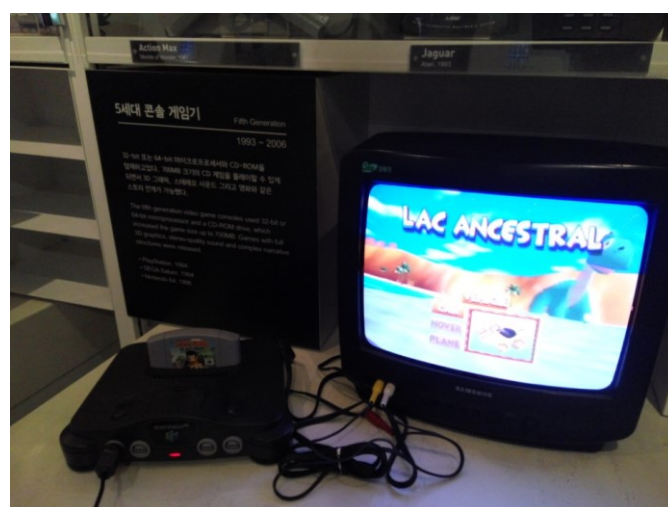


Figure 32 The display of 5th generation video game console NCM

²⁶ A PC-bang is a type of LAN gaming center where patrons can play multiplayer computer games for an hourly fee. (Wikipedia, 2019)

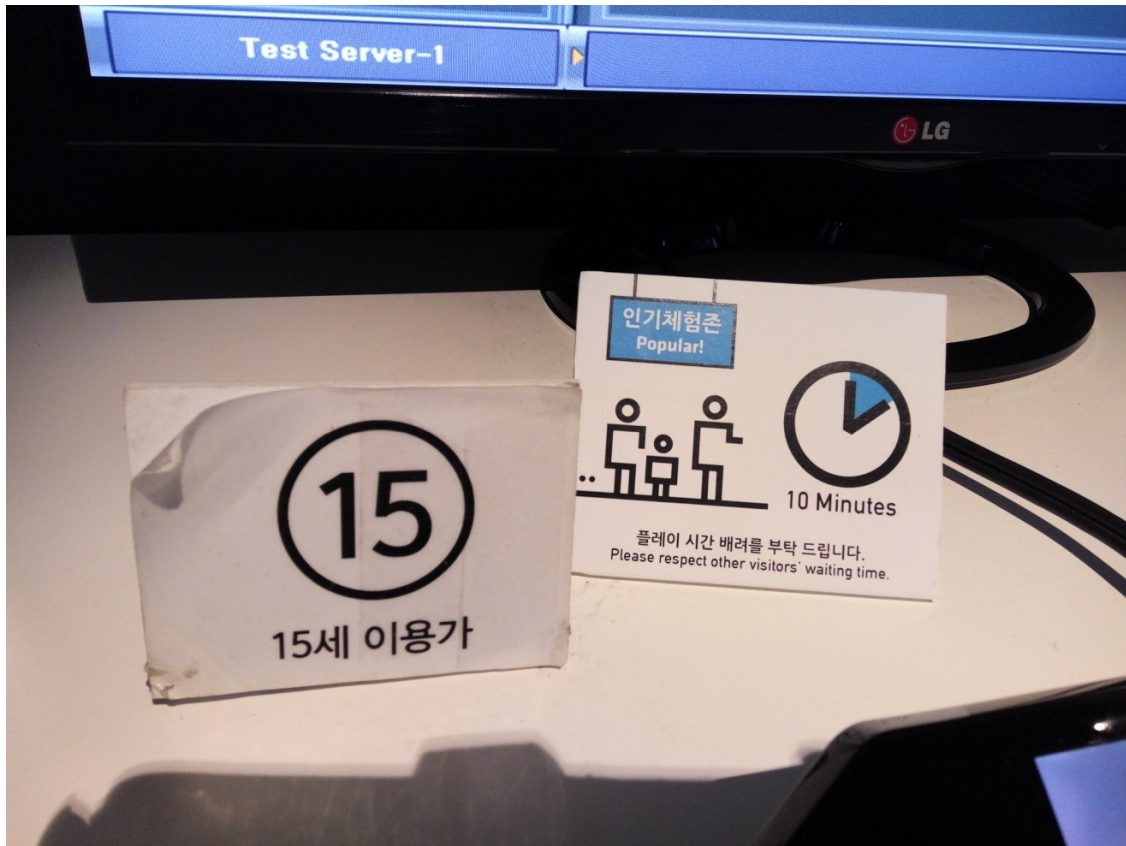


Figure 33 A closer look at NCM's "Open Stage: NCM Library."



Figure 34 Visitors playing video games in multiplay in the NCM 2nd floor “Open Stage: NCM Library.”

The timeline of video game consoles in FMG is displayed in the multi-purpose area, all artifacts in a non-interactive status. The video game consoles are mounted on the wall, on top of a wall painting that resembles a tree – the family tree of video game consoles. Figures 35 – 37 show this exhibition. Each color of the bushes represent which companies manufactured or distributed the machines, with the video game consoles from the same company grouped per color. The vertical height of the installment represents the year, with the lowest row representing the earlier timeframe (the first generation, from the 1970s), and the most recently manufactured devices on the top row. Detailed descriptions of each of these devices are omitted. Niklas Nylund described these objects as “relevant to Finnish game history and culture but not popular or made in Finland” and he himself “did not play all of them.” He emphasized that these devices had to be displayed differently from other games that originated from or gained mainstream popularity in Finland. The area is, he claimed, purposely designed to inform the visitors briefly about the digital gaming history outside of Finland (N. Nylund, personal communication, 10 January, 2018).



Figure 35 The timeline of video game consoles in FMG



Figure 36 The timeline of video game consoles in FMG



Figure 37 The family tree of video game consoles in FMG

To summarize, the findings from this section indicate a link between the aesthetical expressions and the game museum curator's personal gaming experience. NCM showcased the timeline of video game console by using the open library format. The interactive objects in the NCM's display of video game console generations are selected based on curator's personal preferences and gaming experiences under the supervision of the museum director. In contrast, while almost all digital gaming devices displayed in FMG are available to play for visitors, these non-Finnish video game consoles are mounted on a wall in the multi-purpose area. This choice was made based on the FMG's focus on games that were either popularly played or developed in Finland.

Illustrating the Findings Into a Comic and Story

In this section I describe my approach to CBR (Comic-Based Research) in this thesis: how I used the findings from the Visual Discourse Analysis to create a comic, and then to use that to understand and forecast how a potential museum visitor sees the phenomenon of the game museum. Throughout this process, I positioned myself as both an artist and a researcher.

I have illustrated and published a total of 15 episodes of the webcomic "A Brief History of Digital Play: Season 3" bi-weekly from January to 2018 to August 2018. Each episode was made in English and Korean language, containing 10-20 scenes in a vertical format (1:10), suitable for mouse or touchscreen scrolling on digital screens. The webcomic concentrated on providing historical and aesthetical satisfaction; to create visual art that is informative, well-constructed and visually appealing for readers to view, in order to instill the reader's motivation to share and comment. "A Brief History of Digital Play: Season 3" was scripted and illustrated based on the findings collected from observations and dialogue with the curators, which are described in the previous sections, as well as my learnings and questions raised while visiting FMG and NCM. The webcomic was loosely segmented in three acts;

- Act 1: Introducing FMG and NCM
- Act 2: What game means to FMG and NCM
- Act 3: Finnish and Korean gaming subculture

All episodes of the comic are supplemented as an appendix to this thesis in a slightly modified version of the original comic in order to fit into printing paper format.

Act #1 Introducing FMG and NCM

Episode 1 overviewed the current status of worldwide game museums. Episode 2 described the founding story of NCM. The story focused on NCM's active engagement with private corporations and early Korean MMO game developers. It was based on the conversation with NCM Director, who recalled a 'founding event' held in July 2013; when NCM welcomed an invitation-only event with founding members of Nexon (Y. Choi, personal communication, 13 Oct 2017). The founding story of FMG was illustrated in Episode 3, with the emphasis on a dialogue with Mikko Heinonen and the event of *Suomi 100* – celebrating Finland's 100 years anniversary of independence.

Act #2 What 'game' means to FMG and NCM

The second act of the webcomic concentrated on the interpretation of word 'game' in Finland and Korea, focusing on the aesthetical expression of the game Pong and the choice of objects in the topic of 'the origin of the (modern) game.' Also, I reflected some of my cultural astonishment while illustrating the webcomic when I first discovered the different meanings on 'game' between my native language (Korean) and second language (English)²⁷. The curators of FMG and NCM also responded in surprise when I pointed out the conceptual difference between the word 'game' in between English, Finnish and Korean to them.

Episode 4 and 5 illustrate the two different answers to the question of "what is the first game" represented in FMG and NCM. Episode 4 illustrated the story of NCM and their display of imported American and Japanese arcade games in the B1 and 2nd-floor exhibition area, linking them with the interpretation of word 'game' as 'digital game' in the Korean language. Then episode 5 focused on FMG's strong emphasis on board games and the unique culture of Finnish RPG in the region – including the case of live-action role-playing games (also known as "LARP").

Following this notion, Episode 6 and 7 illustrated a more in-depth discussion; the museum's strategic tactics on the choices of objects based on the sociopolitical issues that occurred during the museum's founding process.

In Episode 6 I first explained to the readers the general discourse structure of modern heritage institutions; that the institutional power tends to impact how the museum choose the history

²⁷ As described briefly in Chapter 4, word 'game' is perceived narrowly as 'digital game' in Korean due to a lack of corresponding concept in the language.

to be archived, collected, and displayed. Then Episode 7 covered remarks on the findings from the FMG and NCM's choice of objects. FMG indicated the museum's strong effort on the national identity of Finland with the relation to *Suomi 100*. In the case of NCM, I have concentrated on illustrating the political dispute surrounding the enactment of the "Shutdown Law" in 2011, which happened just before the museum's establishment.

Act #3 Finnish and Korean Gaming Subculture

This last phase of the webcomic covered the general stories that I learned while observing FMG and NCM. There were also various stories that I discovered while talking with the curators that were not fully covered in the exhibitions. One of those aspects was the gaming subcultures in Finland and Korea; the stories of people who enjoy playing games, engage together to create and distribute their self-made secondary creations that are related to the game. I have discovered, while having a dialogue with the curators of FMG and NCM, that both Finland and Korea share similar traces of gaming subculture in the 1980s to 1990s; first, a rise of hacker's culture in the 1980s, suffering from widespread piracy of games in the mid-1990s, and the rise of the network-based game to overcome those issues. It was also a topic that appears to be widely discussed by both Finnish and Korean game historians (Yoon, 2015; Reunanen, 2017). It is generally difficult to display a full story of the gaming subculture and network-based games in the physical museum space. Naturally, as an artist, this came to me as an exciting challenge; to illustrate the stories that are difficult to be displayed physically in the museum space. Thus, I have dedicated Episode 8 to 15 to the hacker's culture, pirated games, and the growth of network-based games in both Korea and Finland. Some episodes had quotes from the FMG and NCM curators, and photos taken during the on-site observation.

Reader's Comments and Reactions

During the comic-making process, I have continually observed and documented the reader's engagement and responses. I have acknowledged the readers of the comic as potential game museum visitors, with no previous experiences of visiting either FMG or NCM but with a keen interest in digital technology and games. The readers were able to write their comments to the comic via social media platforms Facebook and Tapas. A total of 3879 accumulated views from Tapas, and a 44 comments from the readers from both Facebook and Tapas. In addition to the qualitative feedback thus obtained I have also performed a small quantitative analysis by counting and categorizing the views, shares, and comments of the readers. Table 3 breaks down the number of views and comments per episode of the webcomic.

Table 3 The list of “A Brief History of Digital Play: Season 3” - views, shares and comments (11th of October, 2019)

No.	Title	Topic	View	Shares/ Comments
1	Game Museums!	General description of the phenomenon of game museum	300	6
2	Nexon Computer Museum	Introduction of NCM	236	3
3	The Finnish Museum of Games	Introduction of NCM	370	2
4	The first game?	A different interpretation of the word “game” between Finland and Korea	271	5
5	Finland, RPG	Finnish RPG culture	629	8
6	Digital Game Preservation?	Curatorial decisions of game museums	243	2
7	Shaping the history	How game museum influences the game history	292	0
8	Aapeli	Early computers from Finland	264	0
9	Supposed to be educational	Early home computers from Korea	247	5
10	Proud nerds	Hacker's culture in Finland & Korea	219	4
11	Demoscene	Assembly, Finland	173	3
12	Pirates!	Copied games and the struggle of the local gaming industry	199	2
13	Connected	Network-based games in Finland and Korea	153	4
14	Group up, and Play!	Network-based games in Finland and Korea	166	4
15	Ping Pong & eSports	Korean eSports culture	157	1

However, just counting numbers of views and comments of anonymous online users' came with certain limitations, such as fluctuations caused by various random factors on the internet. For example, Episode 5 shows an unusual spike of views compared to other episodes, but it is not clear what caused those increases. It also remained unclear why the views gradually reduced in time by the end of the season – it might be the case that the readers were bored or found those episodes less interesting than the previous episodes.

The qualitative analysis on each user's comments indicated more important findings. A majority of readers tended to be active in expressing their feelings or opinion about the comic. This result is not surprising, as a considerable amount of comments on social media is about expressing one's opinion either in positive or negative ways. What was interesting was the contribution of additional knowledge to the discussion from the readers. According to Table 4, a substantial amount of readers (61.4%) shared their insights, information, or experiences about the contents of the comic. This was nearly twice as many as those who did make such contributions, indicating that the comic was successful in engaging an interested audience. Along the comic-making process, I have also reflected some of the reader's comment in the following episodes. The readers then expressed their surprises and excitement that their voice was being heard from the artist.

Table 4 The reader's engagement in "A Brief History of Digital Play: Season 3"

Category	Description	Percentage (%)
Engage	The reader expressed a feeling or opinion	70.5
	The reader did not express a feeling or opinion	29.5
Contribution	The readers contributed further insights into the comic based on his/her knowledge or experiences	61.4
	The reader did not contribute further insights into the comic.	38.6

Overall, the comic readers, the potential museum visitors, appear to recall and reflect on their personal gaming experiences when reading "A Brief History of Digital Play: Season 3." As shown on Figure 38, readers commented about their own personal experiences on retro games close to the topic of the episode. Readers were sharing knowledge and experiences, and a feeling of their nostalgia. Some readers left comments with a hyperlink that provides additional information and historical evidence. In contrast, the readers did not inquire whether the game museum's choice of object and aesthetical expressions were scientifically well preserved or historically accurate.

i work in IT, i've seen things like this a lot especialy with people that didnt grow up with computer

i'm from 81, so when i was a little kid, computers werent all that common place in most people homes.
we had a commodore 64 (the brown breadbin model)
we only go our first PC in the early 90's, it was an IBM 286 XT. We bought it second hand from my dads work when they were upgrading.
(yea, i acutaly had computers that used 5,25 inch drives)

2 🍌🍌 Reply To Conversation

In our country (Slovakia), a game can also mean a lot of things. Not just video games. You know, just common stuff, board games, playing roles, games like hide and seek, etc. Most of them played by kids. My first game (speaking of PC or video games in general) was either first Prince of Persia or The Neverhood (great game, if you didn't hear about it, I definitely recommend you to check it out). By the way, thanks for your comics. I am looking forward to every new episode!

1 🍌🍌



Solip Creator Mar 15

Great to know more perspectives :D Thank you!

🍌🍌 Reply To Conversation

I am an 8bit kid. I designed a SW on paper for a competition organized by Samsung Electrics in 1985. I won a prize with cash.(approx 300 euros) I saw Mr. Lee Byungchul.(The first chairman of Samsung group). And I could convince my father to buy a PC(Apple][+ copy) as an educational tool. And I am still designing SW.



A Brief History of Digital Play :: Supposed to be... | Tapas

A butterfly effect to make "educational" computer :D

TAPAS.IO

👍 Like 💬 Comment ➦ Share

👍👍👍 and 14 others

1 Share

Actually, I still remember the price of SPC-1000. 495,000Won.

Like · Reply · 1w



My very first game was 'Math Rabbit' : D
https://en.wikipedia.org/wiki/Math_Rabbit



Math Rabbit - Wikipedia

EN.WIKIPEDIA.ORG

Like · Reply · Remove Preview · 2w

Circa 1977, Busan



Like · Reply · 2w

Wow I'm surprised that you have tapas, and really have a interesting content ! Autofollow your account.

Looking forward for your another story !... See More

Like · Reply · 2w

Another great comic. Btw, I must admit, the mentioning of Slovakia surprised me. :D

2 🍌🍌



Solip Creator Jun 08, 2018

Yay!

🍌🍌 Reply To Conversation

Super cool! Never knew there was something like this in the gaming scene back in the day. Reminds me of how speedrunners who do any% runs will try to find all sorts of ways of 'writing' code using the games assets to glitch through it, such as in this video: <https://www.youtube.com/watch?v=gECESoU8Es>

Like · Reply · Remove Preview · 34w

Figure 38 Reader's engagement of contributing additional information to the comic

Chapter 5. Conclusion

Summary of Findings and Results

This chapter summarizes the previous chapters, including the findings and results from Chapter 4. And it connects those results with to form cohesive message to answer the research question of this thesis, which are;

- How do the Finnish Museum of Games (FMG) and Nexon Computer Museum (NCM) display games differently in the museum space?
- How do curators and potential museum visitors' gaming memories relate to the choices of displayed objects and aesthetical expressions in FMG and NCM?
- How can comics, as a research tool, supplement the study of game museums and their potential visitors?

The goal of this thesis was to find the influence of curators and potential game museum visitors on the game museum's choice of object and aesthetical expressions. In this thesis, I first used the method of Visual Discourse Analysis with practices of on-site observation and dialogue with the curators. The second method was Comic-Based Research, which I have created and published an educational webcomic series that covers the story of the game museum and collected the response of readers. According to the findings, FMG and NCM's choices of objects and aesthetical expressions are indeed culturally diverse. Even similar historical events and topics were showcased differently in their museum space. The data indicated that this was either due to the personal gaming experiences of curators and the sociopolitical phenomena that influenced that curator's selection process.

The results are summarized as follow:

- A. Game museum's choices of objects are under the influence of concurrent domestic sociopolitical discourses regarding the phenomenon of digital games.
- B. Game museum's choice of aesthetical expression are under the influence of their curator's gaming memories, experience, and nostalgia.
- C. Both curators and potential visitors of game museum tend to reflect their memories and express their nostalgia when perceiving the topic of game museums and their exhibition.

The Finnish Museum of Games (FMG) is located at Tampere, Finland. The museum was founded while closely collaborating with the national project of *Suomi 100*; a series of Finnish government and municipalities' events and projects that celebrates the 100th anniversary of Finnish independence. *Suomi 100* and the city of Tampere perceived the history of Finnish game as one of the national pride and heritage – which lead the FMG to become a public, city-funded permanent game museum. The museum also collaborated with local private collectors and academia upon initiating their crowdfunding project. Therefore FMG curators were keen on emphasizing the positive influence of gaming on Finnish society. The museum is concentrating on the history of Finnish games. FMG's oldest item is *Lustfärd till Aavasaksa* (*Huvimatka Aavasaksaan* in Finnish), a Finnish board game from the 19th century. Most non-Finnish video games, in contrast, were displayed non-interactively in FMG's display of the timeline of video game console generations. The curators of FMG – who are also the founding members of FMG – were actively reflecting their childhood memories in the museum exhibition. For example, the game Pong in FMG was surrounded by various household items from the 1980s, with a bright and comfortable atmosphere. Most of these items are available to touch and interactive for all visitors.

The curators of the Nexon Computer Museum (NCM) were also expressive about their memories in the museum space, which became apparent in how they select the interactive objects. In the case of NCM's interactive games in the "Open Library" exhibition, for example, objects are selected upon the curator's experience and memories. However, due to negative criticism towards digital games in South Korea during NCM's establishment (legislation to regulate young people's gaming), the museum curators conducted some strategical actions. The museum was named as 'computer museum' instead of 'game museum' as they were concerned to be neglected by the public or academia otherwise. They also choose the Apple I computer, a multi-purpose personal computer, as their primary object despite its only loose historical connection with the topic of game history. In contrast to FMG – which actively displays the Finnish gaming history – NCM actively seeks to blend the Korean gaming history as part of a global phenomenon, as shown in their display of game Pong that concentrates on the commercial success of global gaming industry instead of historical accuracy of the replica.

Next, by using the research method of Comic-Based Research (CBR), I have created a webcomic titled “A Brief History of Digital Play: Season 3”. The webcomic was presented to anonymous online readers – who are seen as potential visitors of the game museums. The format of webcomic allowed interaction between the artist and researcher (myself) and the audience. The results indicated that the readers were, like game museum curators, reflecting their personal gaming experiences upon perceiving the topic of the game museum and their exhibitions. The readers actively commented about their thoughts, memories, or other facts that are related to the topic of FMG and NCM or the history of games in general.

Conclusion: Displaying the Gameplay but Playfully

The game museum is a new, conventional, modern historical institutions with less than 20 years of history. This thesis research revealed a unique positioning of game museum compared to other heritage institutions. The findings from the thesis research indicated that the choice of objects in FMG and NCM was under the influence of domestic sociopolitical discourses upon the museum’s establishment. It was either structured in a way to carefully counter a criticism towards gaming (in the case of NCM) or enhancing the national agenda (in the case of FMG). By doing so, both try to nurture a positive image of gaming in modern society. The choice of two game museum’s aesthetical expressions, including the interactivity, were closely connected to the personal gaming experiences – and nostalgia – of museum curators. Also, both, game museum’s curators and the potential visitors, were actively engaged and motivated to contribute to the topic of the history of games.

There, I have sensed a desire of *embracement* in both museum’s curators and potential visitors; they want their gameplay memories to be heard, reflected, and therefore, positively embraced in their society. They desire their memories and games to be properly and positively presented in the game museum space – interactive and *playful* as they were originally. However, this inevitably raises a contradiction with the role of the game museum as a heritage institution. In order to fully conserve and preserve the objects, those objects must be somewhat protected from the visitor’s touch – *display* instead of being playful or interactive. During this thesis research, I have noticed that most primary objects in FMG and NCM were interactive. This means that despite their effort of becoming a historical and scientific heritage institution, game museums are currently prioritizing the value of being *playful* over plain preservation. The game museum’s unique position of being the institution

that is *displaying the gameplay* but seeks to remain *playful* might be a major reason why the topic of game museums is intergenerationally engaging.

However, this then also raises another question: Are game museums able to remain playful – even for future generations? My impression is that in order to continuously appeal to future audiences in decades to come, the game museum must continue to adopt to changes in a fast paced industry and culture. This means that game museums may require frequent updates in a much faster pace than other modern heritage institutions. It also implies that game museum must actively observe, research, and learn about their future visitors.

In this thesis research, I have explored the potential of using visual art (webcomic) as a communication and research tool to learn about the potential museum visitors and their expectations. I suggest this could be one of the many methods that the game museums may use to learn about their potential visitors, prior to planning and designing their future exhibitions. I hope this thesis research will inspire further in-depth analysis of this new, unique, and distinctive phenomenon of game museums. Furthermore, I look forward to be involved with further studies on worldwide game exhibitions, comics and games as a interactive visual storytelling platform.

References

- Alexander, E. P. (1979). *Museums in Motion: An Introduction to the History and Functions of Museums* (2 ed.). Altamira Press.
- Barone, T. (2011). *Arts Based Research*. Los Angeles: SAGE Publications.
- Bennett, T. (1995). *The Birth of the Museum: History, Theory, Politics* (1 ed.). London: Routledge.
- Getz, T. R., & Clarke, L. (2012). *Abina and the important men: A graphic history*. OUP USA.
- Heinonen, M. (2017). From our garage to the Finnish Museum of Games: History in the making. *Skrolli*, 82.
- Hooper-Greenhill, E. (1992). *Museums and the Shaping of Knowledge*. London: Routledge.
- Hooper-Greenhill, E. (2006). *Museum, Media, Message*. London: Routledge, Taylor & Francis.
- Houlberg Rung, M. (2008). Art Museums and Creative Citizens. *Museological Review*, Issue 13.
- Houlberg Rung, M. (2008). The art museum as a platform for self-formation. *Making National Museums*. Copenhagen: Linköping University & Statens Museum for Kunst.
- Houlberg Rung, M. (2014). Negotiating experiences visiting statens museum for kunst. University of Leicester, School of Museum Studies.
- ICOM. (2017). *ICOM Code of Ethics for Museums*. Paris, France: INTERNATIONAL COUNCIL OF MUSEUMS (ICOM).
- Jin, D., & Chee, F. (2008). Age of New Media Empires: A Critical Interpretation of the Korean Online Game Industry. *Games and Culture*. Sage.
- Juul, J. (2011). *Half-Real: Video Games between Real Rules and Fictional Worlds*. MIT Press.
- Kang, S.-K., Na, B.-R., Park, K.-S., Park, S.-W., Yoon, T.-J., Lee, D.-W., . . . Joo, J.-W. (2013). *게임포비아 (GamePhobia)*. Seoul: Communication Books.
- Kim, K. (2012). *디지털 게임의 재발견 (Revisiting Digital Games)*. Seoul: Communication Books.
- Kuttner, P. J., Sousanis, N., & Weaver-Hightower, M. B. (2017). How to Draw Comics the Scholar Way: Creating Comic-Based Research in the Academy. In P. Leavy (Ed.), *Handbook of Art-Based Research* (pp. 396-422). The Guilford Press.
- Laurel, B. (1993). *Computers as Theatre* (2 ed.). Addison-Wesley Professional.
- Leavy, P. (2018). Introduction to Arts-Based Research. In P. Leavy (Ed.), *Handbook of Art-Based Research* (pp. 3-21). New York, USA: The Guilford Press.
- Liamputtong, P., & Rumbold, J. (2008). Knowing Differently: Setting the Scene. In P. Liamputtong, & J. Rumbold (Eds.), *Knowing Differently: Arts-Based and Collaborative Research*. New York: Nova Science Publishers.
- Lidchi, H. (1997). The Poetics and the Politics of Exhibiting Other Cultures. In S. Hall (Ed.), *Representation: Cultural Representations and Signifying Practices* (Vol. Sage in association with the Open University). London.
- Lowood, H. (2009). Memento Mundi: Are Virtual Worlds History. *iPRES 2009: the Sixth International Conference on Preservation of Digital Objects* (pp. 121-128). San Francisco: California Digital Library.
- Lowood, H., Monnens, D., Vowell, Z., Ruggill, J. E., McAllister, K. S., & Armstrong, A. (2009). Before It's Too Late: A Digital Game Preservation White Paper. (H. Lowood, Ed.) *American Journal of Play*(Fall 2009), 139-166.
- McCloud, S. (1993). *Understanding Comics: The Invisible Art*. New York: Kitchen Sink Press.

- McNiff, S. (2008). Art-Based Research. In J. G. Knowles, & A. L. Cole, *Handbook of the arts in qualitative inquiry : perspectives, methodologies, examples, and issues* (pp. 29-40). SAGE. doi:<http://mr.crossref.org/iPage?doi=10.4135%2F9781452226545>
- Nalu, A., & Bliss, J. P. (2011). Comics as a cognitive training medium for expert decision making. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 55, pp. 2123–2127.
- Naskali, T., Suominen, J., & Saarikoski, P. (2013). The Introduction of Computer and Video Games in Museums – Experiences and Possibilities. *International Conference on History of Computing (HC). AICT-416*, pp. 226-245. London, United Kingdom: IFIP Advances in Information and Communication Technology, Making the History of Computing Relevant.
- Newman, J. (2004). *Videogames*. London: Psychology Press.
- Newman, J. (2009). Save the Videogame! The National Videogame Archive: Preservation, Supersession and Obsolescence. *M/C JOURNAL*, Vol 12, No 3.
- Newman, J. (2011). (Not) Playing Games: Player-Produced Walkthroughs as Archival Documents of Digital Gameplay. *"The International Journal of Digital Curation Issue 2,*, 109-127.
- Newman, J. (2012). *Best Before: Videogames, Supersession and Obsolescence*. Routledge.
- Newman, J. (2012, Volume: 18 issue: 2). Ports and patches: Digital games as unstable objects. *SAGE Journals*, pp. 135-142.
- Nexon Computer Museum. (2014). *Computer, an Idea that Changed the World* (Vol. 0). Jeju: Nexon Computer Museum.
- Nexon Computer Museum. (2018, 1). *Nexon Computer Museum official website*. Retrieved from <http://www.nexoncomputermuseum.org/>
- Nylund, N. (2015). *Walkthrough and Let's Play: Evaluating preservation methods for digital games*. Tampere, Finland: University of Tampere.
- Nylund, N. (2017). Preserving Game Heritage with Video Interviews. *Finnish Museum 2017*, (pp. 32-52).
- Ramos, M. J. (2010). *Histórias Etíopes*. Tinta da China.
- Reunanen, M. (2017). *Time of Change in the Demoscene: A Creative Community and Its Relationship with Technology*. Turku: University of Turku.
- Rose, G. (2016). *Visual Methodologies: An Introduction to Researching with Visual Materials* (Vol. 4). SAGE Publications.
- Salen, K., & Zimmerman, E. (2004). *Rules of Play: Game Design Fundamentals* (Kindle ed.). MIT Press.
- Short, J. C., Randolph-Seng, B., & McKenny, A. F. (2013). Graphic presentation: An empirical examination of the graphic novel approach to communicate business concepts. *Business Communication Quarterly*, 76 (3), 273-303.
- Sicart, M. (2009). *The Ethics of Computer Games*. MIT Press.
- Sones, W. (1944). The comics and instructional method. *Journal of Educational Sociology*, 18(4), 232-240.
- Sousanis, N. (2015). *Unflattening*. Harvard University Press.
- Stenros, J. (2015). Playfulness, Play, and Games- A Constructionist Ludology Approach. Tampere University Press.
- Stuckey, H., Swalwell, M., Ndalianis, A., & Vries, D. d. (2013). Remembrance of Games Past: The Popular Memory Archive. *IE'2013. September 30 - October 01*. Melbourne, VIC, Australia: ACM.
- Suominen, A., Kallio-Tavin, M., & Hernández-Hernández, F. (2017). Arts-Based Research Traditions and Orientations in Europe. In P. Leavy (Ed.), *Handbook of Arts-Based*

- Research* (pp. 101-120). New York, USA: The Guilford Press.
- Suominen, J. (2008). The Past as the Future. Nostalgia and Retrogaming in Digital Culture. *Fibreculture 11*. Web. 17 Jun 2014.
- Suominen, J., Reunanen, M., & Remes, S. (2015). Return in Play: The Emergence of Retrogaming in Finnish Computer Hobbyist and Game Magazines from the 1980s to the 2000s. *Kinephanos. Special Issue*, pp. 76-102. Canada: Cultural History of Video Games.
- Suominen, J., Sivula, A., & Garda, M. B. (August 2018). Incorporating Curator, Collector and Player Credibilities: Crowdfunding Campaign for the Finnish Museum of Games and the Creation of Game Heritage Community. *Kinephanos (Special Issue: Preserving Play)*, (pp. 174-196). Retrieved from <https://www.kinephanos.ca/2018/incorporating-curator-collector-and-player-credibilities-crowdfunding-campaign-for-the-finnish-museum-of-games-and-the-creation-of-game-heritage-community/>
- Swalwell, M. (2013). Moving on from the Original Experience: Games history, preservation and presentation. *Digital Games Research Association DiGRA*.
- Syma, C. K., & Weiner, R. G. (2013). *Graphic novels and comics in the classroom: Essays on the educational power of sequential art*. McFarland.
- Vapriikki. (2018, 1). *Finnish Museum of Games*. Retrieved 12 2017, from <http://vapriikki.fi/en/pelimuseo/>
- Waern, A. (2012). Framing Games. *DiGRA Nordic 2012 Conference: Local and Global – Games in Culture and Society*. Digital Games Research Association DiGRA.
- Weaver-Hightower, M. (2017). Losing Thomas & Ella: A Father's Story (A Research Comic). *Journal of Medical Humanities*, 38(3), 215–230.
- Yoon, T.-J. (2015). *디지털 게임문화연구 (Digital Game Culture Studies)*. Seoul: Communication Books.
- Yoon, T.-J., & Cheon, H. (2014, Vol. 17(5)). Game playing as transnational cultural practice: A case study of Chinese gamers and Korean MMORPGs. *International Journal of Cultural Studies*, Vol. 17(5) (pp. 469–483). Sage.
- Zimmerman, E., & Salen, K. (2004). *Rules of Play: Game Design Fundamentals*. MIT Press.

Appendix

A Brief History of Digital Play: Season 3

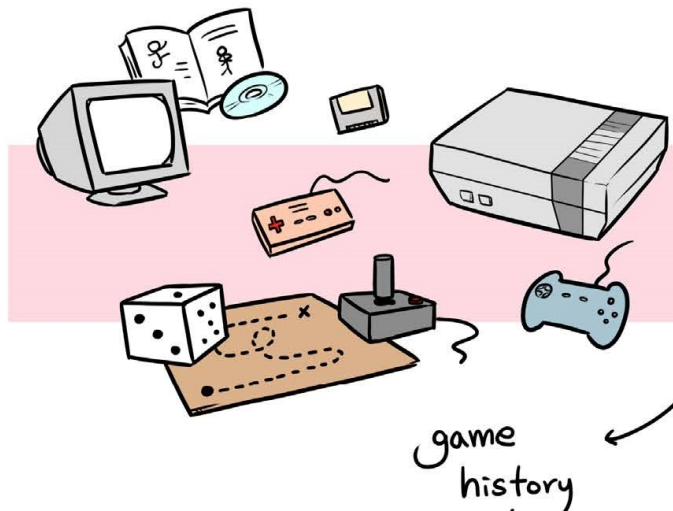


Have you ever
heard about game museum?



Like it says.

game museums are...



Museum
about
games
(obviously)

game

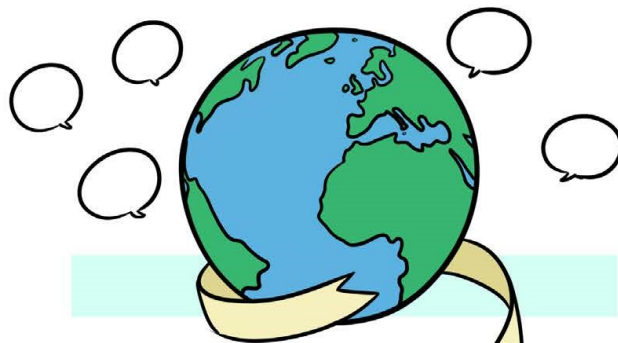


And each of these game museums
illustrate the unique stories
of their game history & culture

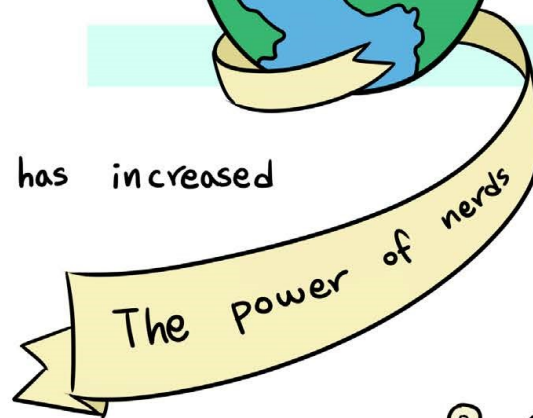


hidden stories

local
community



In recent years,
the number of
game museums has increased



It's alive!!



So In the next few episodes,
we're going to dive into:



Finnish Museum
of Games
"Suomen Pelimuseo"



I live close by

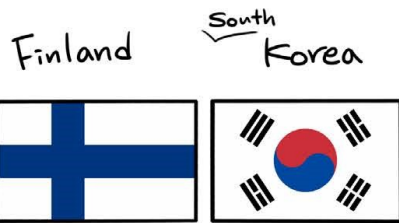


Nexon
Computer
Museum

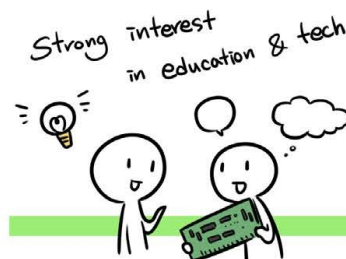
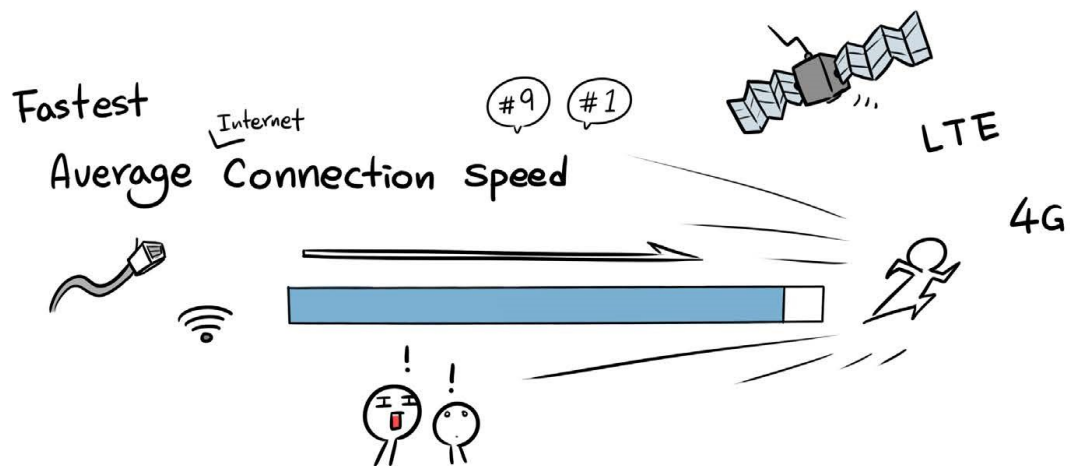
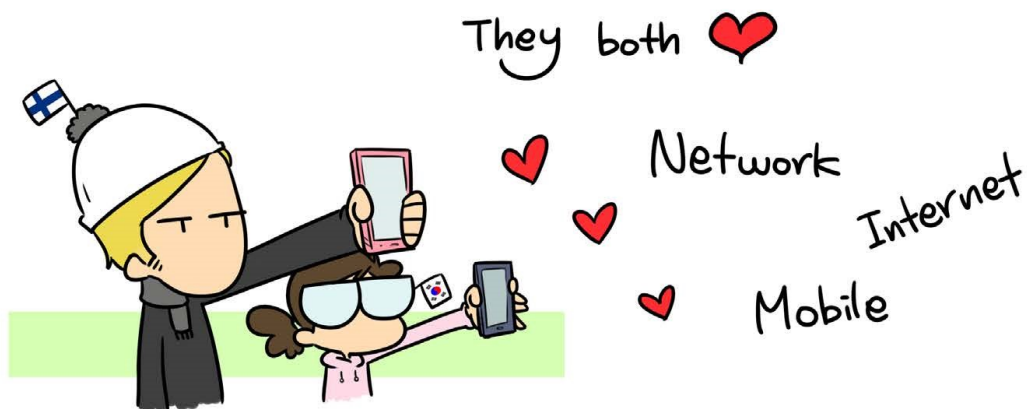
넥슨 컴퓨터 박물관

I used to
work here





Two countries have
some common things :)



Surprisingly (?)

Big ICT & Game industry

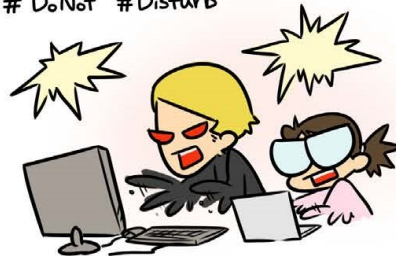


Oh, also...

DefaultMode



GameMode
DoNot #Disturb



But...
that's a thing...



So...



what's their
first game?

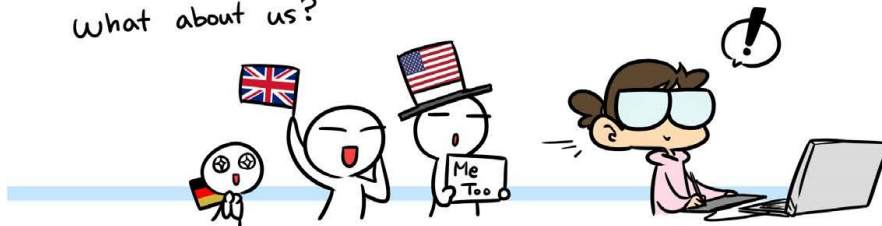


How do they
remember gameplay?

what does it
tell us?

etc etc

What about us?



Leave your comments


if there are museums you also
want me to explore in the future!

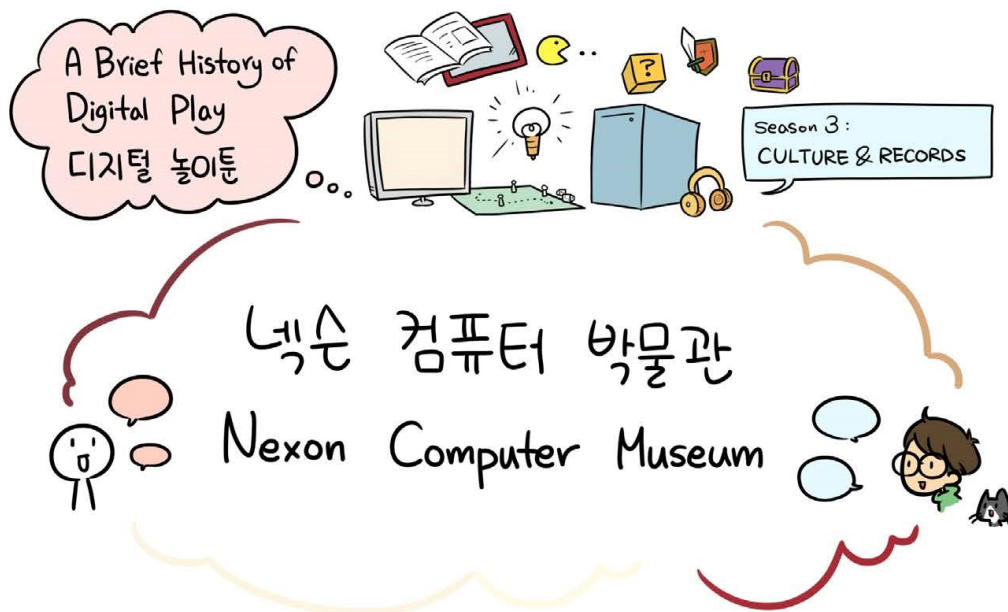


Let's go!

UP NEXT



Written & Illustrated by  **Salip B.T.L.**



NEXON
COMPUTER
MUSEUM



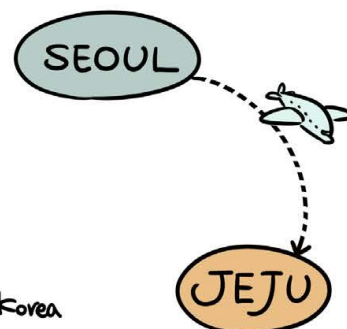
Nexon Computer Museum

is located in Jeju (제주).

about 1 hour flight

away from Seoul

↳ The capital
city of South Korea





why Jeju?

Nexon is a South Korean online game publisher, with their holdings company & some of their studios in Jeju

And, ^{not surprisingly,} they are the

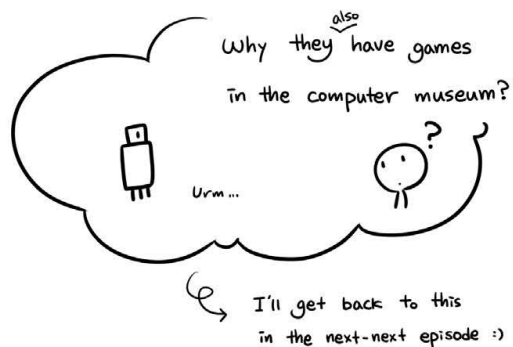
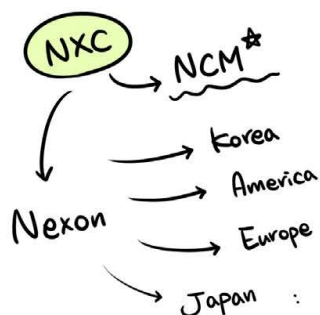
ones who founded NCM

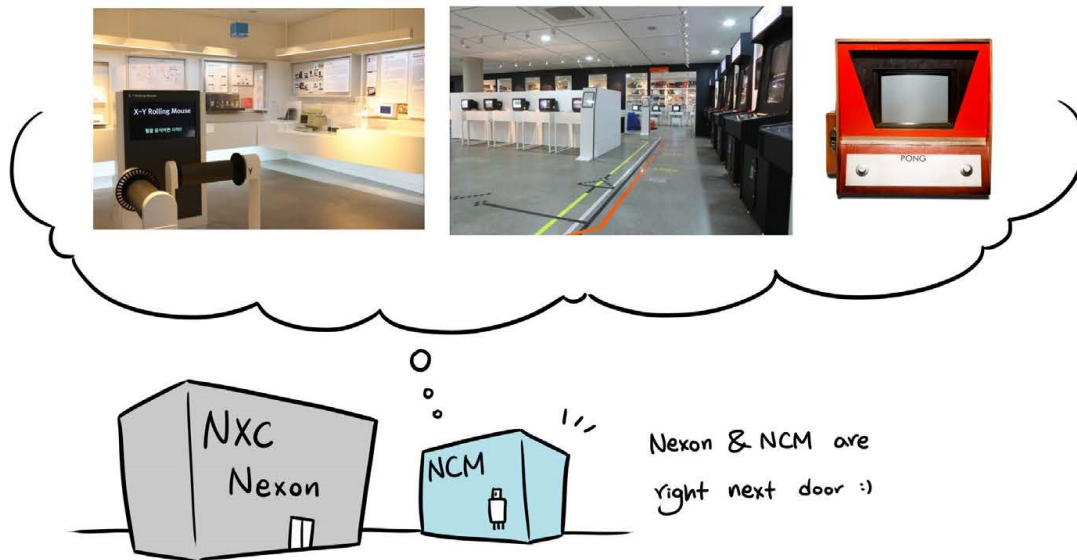


NCM



Nexon
Computer
Museum





Nexon Computer Museum
was established with the help of
early South Korean game developers



Nexon

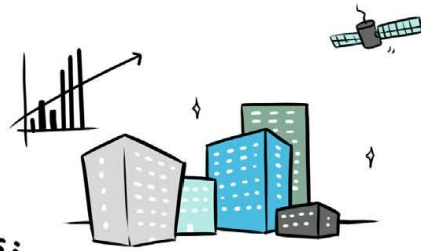
Online game

"The Kingdom of the Wind"
(바람의 나라) in 1996



- ran in dial-up internet
- subscription model
- East Asian fantasy





It is now known as:

The begining of South Korean
online game industry

MMO

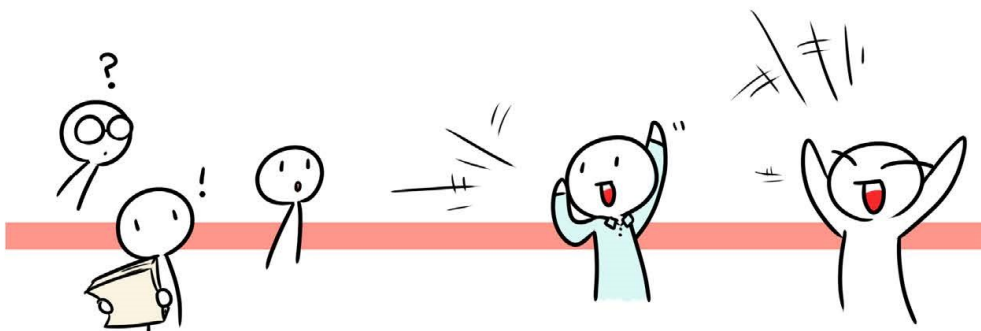
And after 10+ years...

One typical day of
the legendary founders

Museum?

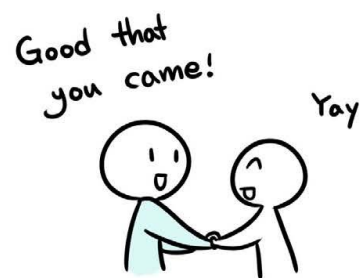


Cool!





Credit : Nexon Computer Museum



The museum is regarded as:

“ The first permanent museum
in East Asia dedicated to
the history of computer & video game ”



Personal
Computers

Arcades

Consoles



Online games



etc
etc

✓ Exhibitions

✓ Educations

✓ Workshops



✓ Keyboard Waffle



w/
Mouse bread

Now to Finland ~

UP NEXT



Written & Illustrated by ^{△OI} 슬립



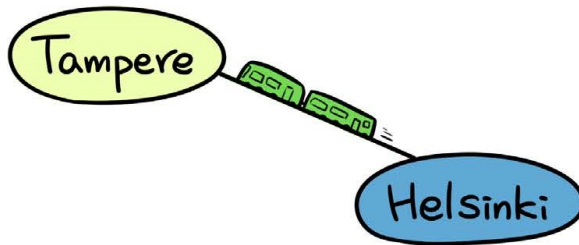
The Finnish Museum of Games is

located at Tampere,

roughly 2 hours

train distance

from Helsinki



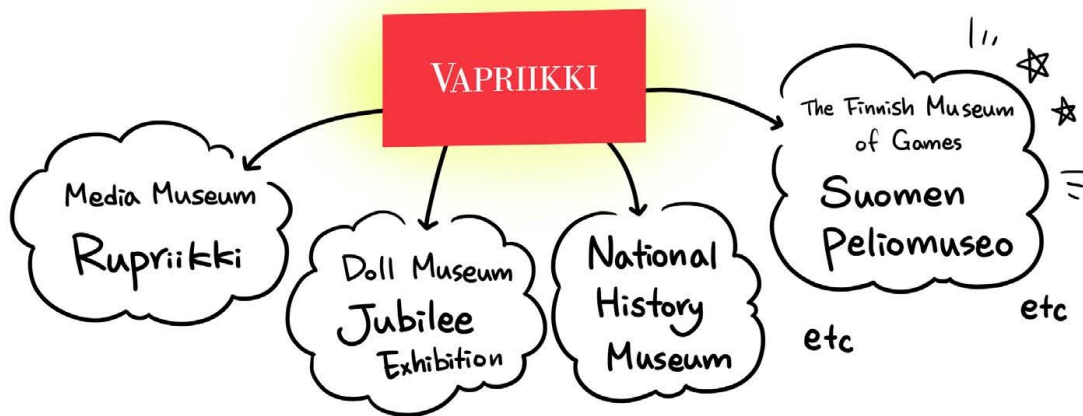
FYI:

Santa doesn't live in Tampere



It is a national museum
operated by the city of Tampere.
the Vapriikki Museum Centre





The Finnish Museum of Games

was originally initiated through
a crowdfunding campaign in 2015



Early Finnish game developers and designers,



Finnish game companies and the city of Tampere

**SUP
ERC
ELL**

 HOUSEMARQUE

AVOIN *All Rights Reserved*
TAMPERE

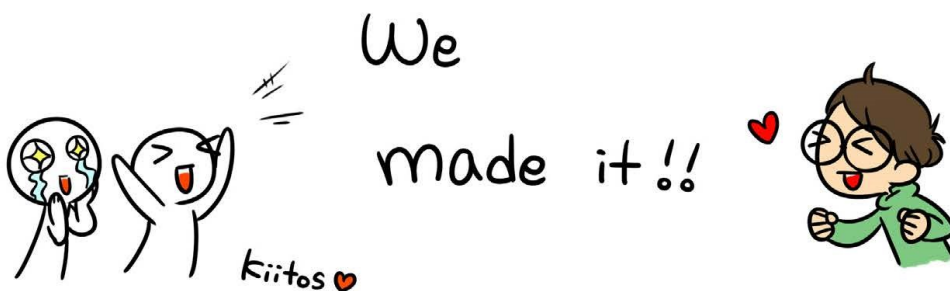
CO
COLossal
ORDER



One hundred
years anniversary
of Finland

2017





The Finnish Museum of Games
especially focuses on the history of :

- ✓ games made in Finland
- ✓ games played in Finland





Now, let's look into
Finnish & Korean gaming history ♥

UP NEXT



Written & Illustrated by
SIMPLO

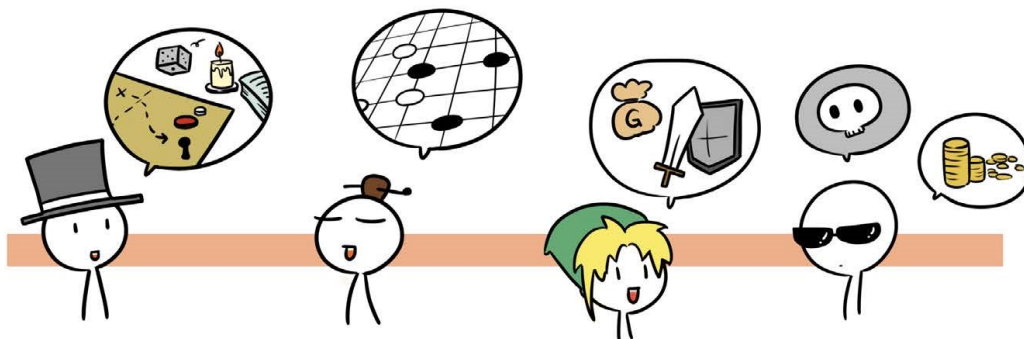


This is actually one of the mysterious
questions in game researchers, historians... etc
etc

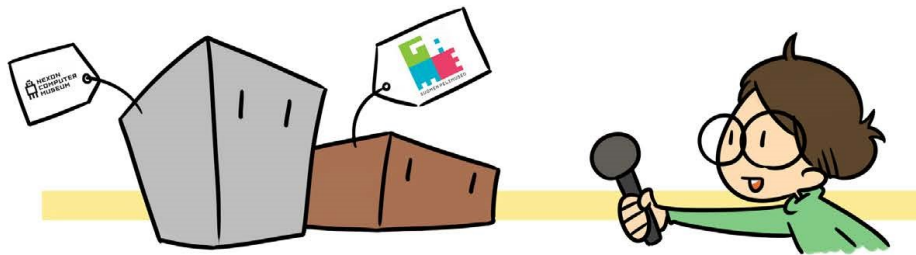


why?

Because each world has its own ideas about what "game" is



So let's look at
game museum's thoughts on this



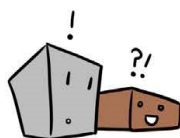
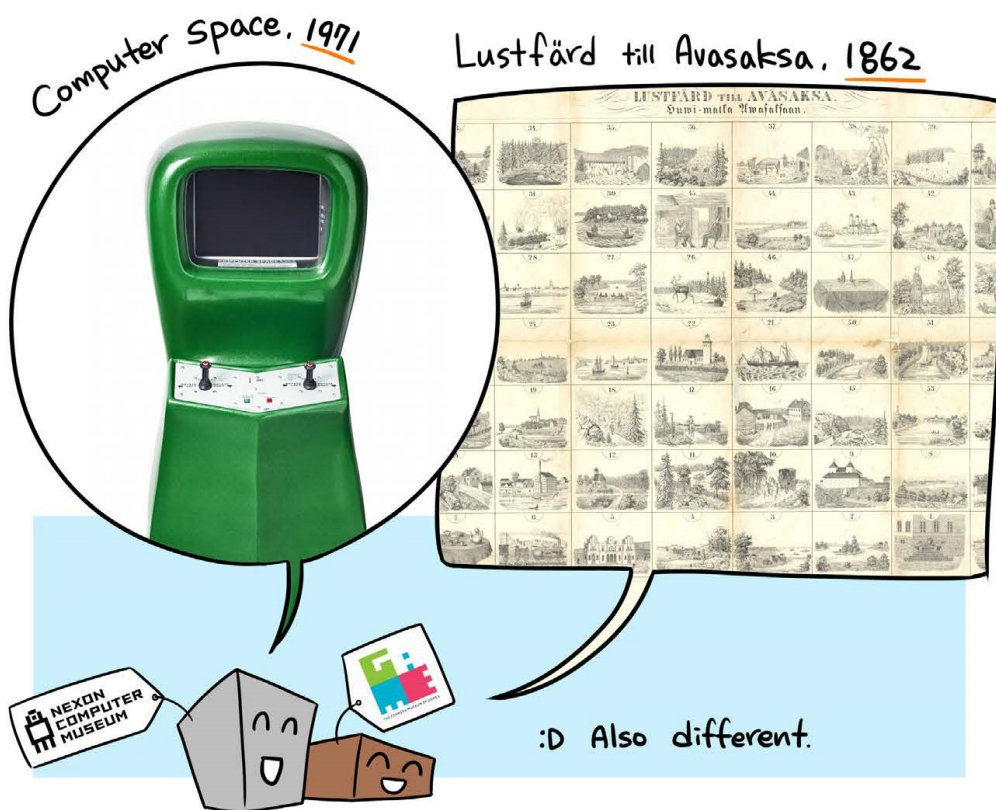
What is "your"
first game?

"The oldest
collection"
(at the moment)



What future generations
would learn about us





there's no
right or wrong
answer



But more importantly,

"Why" are they different?

Korean

In Korean language, the word "game" is generally accepted as "digital game"



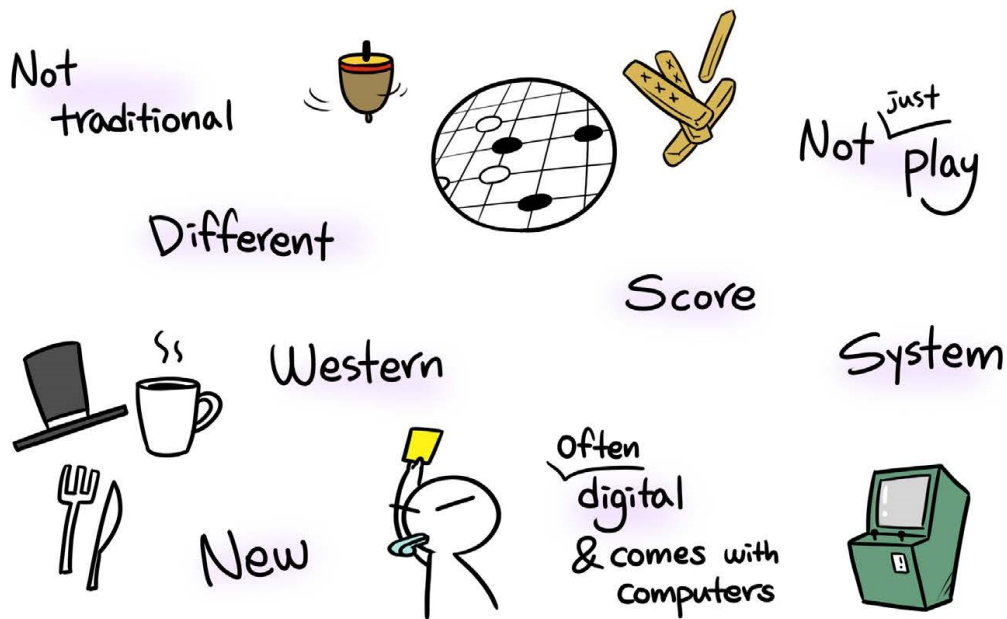
or, competition



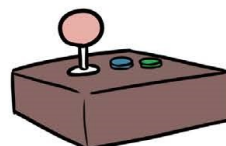
This is probably
because how the word
"game" first came
to Korea



This led Koreans to
generally use the word "Gei-Ihm" (Game) as:



Game. as part of digital culture





So, the first game being displayed
at Nexon Computer Museum is:

Computer Space

"The first commercially
sold video game"

↓
in the USA



However,
in Finland...

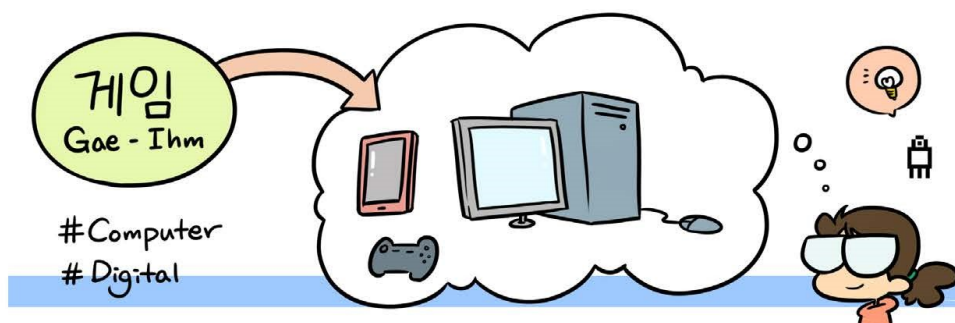
UP NEXT



Written & Illustrated by Siliu & IL



Last time we talked about
the word "Game" in Korean culture



of course, things get ^{slightly} different when you
go to the different side of the world

what about...

Finland!

The promised land
of (metal and) RPG

Game:

Peli

#Internal
#Smile



Role-Playing Game



A game that
people play in a role

Wizard
Archer
Knight
etc



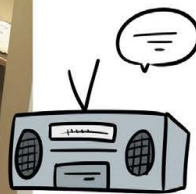
And the tradition of RPG is
deeply rooted in Finnish ^{nerd} culture



Table RPG



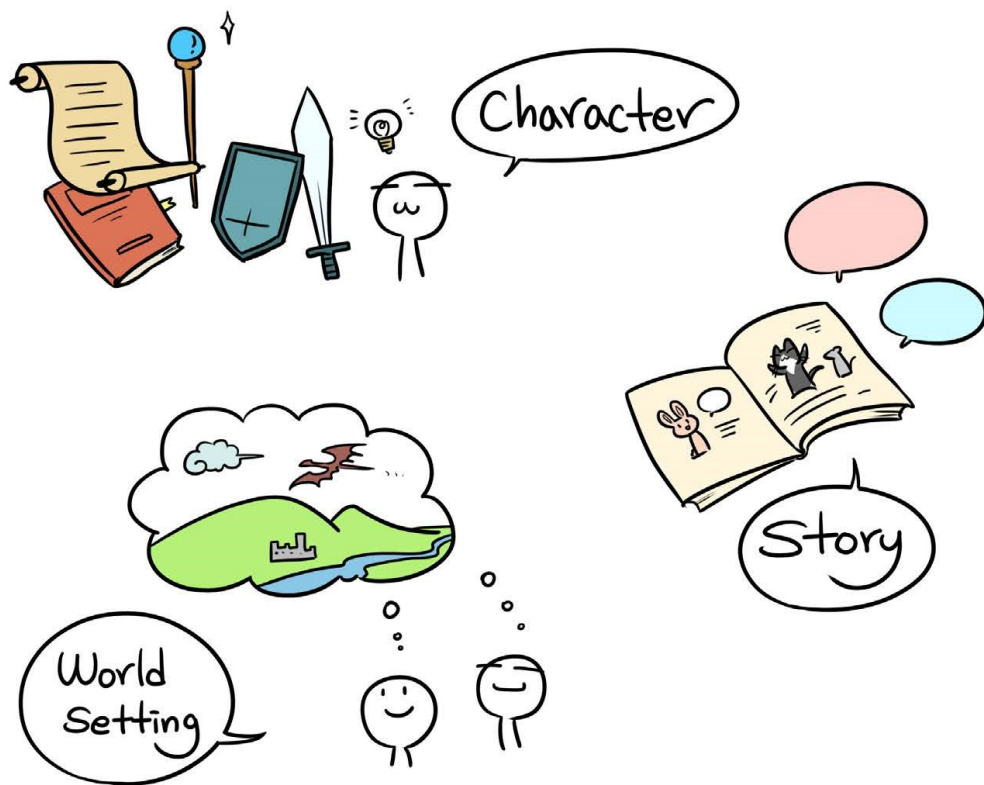
Live RPG



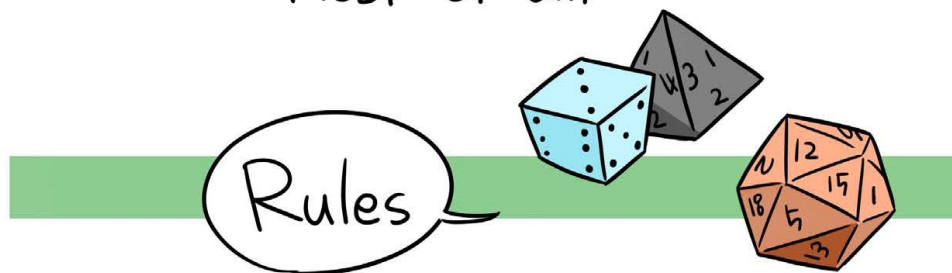
Radiocl! RPG

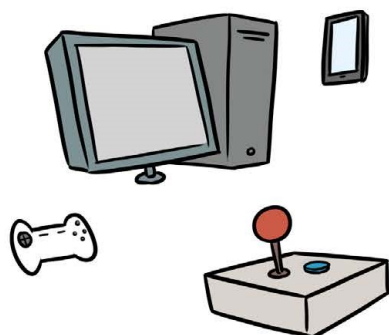
etc etc

What you need in RPG is...



Most of all,



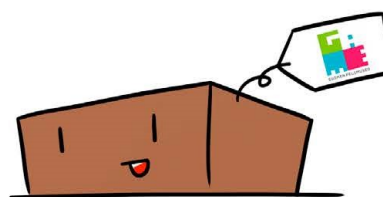


So, in Finland
computers are something
that may or may not be needed
for playing games
↳ "Peli"



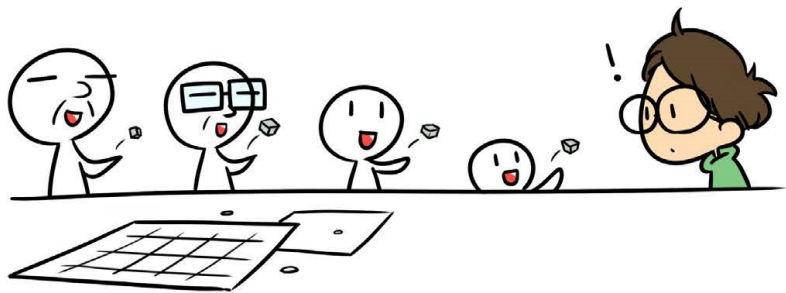
Then

what's the first
game being displayed

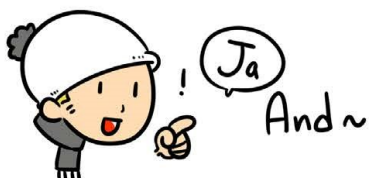


in the Finnish Museum of Games?

"Lustfärd till Avasaksa 1862"



A board game that has been
passed on by a family (!)



Miekka ja Magia, 1987 (Sword and Magic)



The first commercially
sold Finnish RPG



↳ Original developer



"Rajakatse", 1995
(Border Gaze)



The longest running Finnish Live RPG



"What was your
first game?"

This simple question,
shows us how diverse
this world is :D

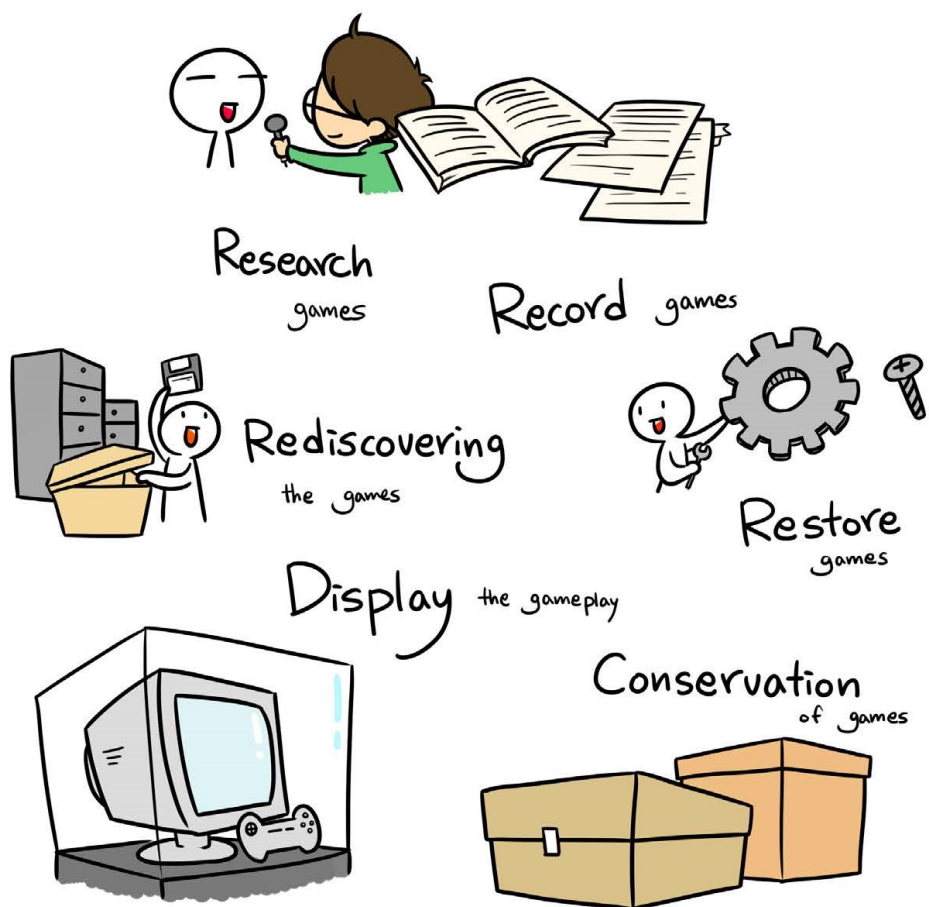
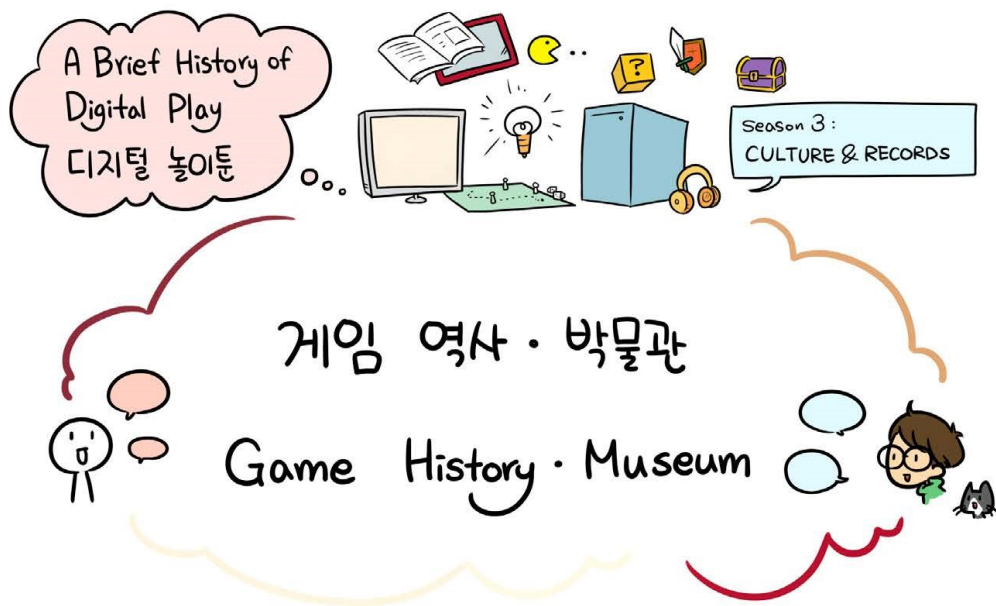


Ok, then...

UP NEXT



소원



These are
the processes
that are involved with:

“Digital Game Preservation”

Dr. Henry Lowood
at Stanford Library

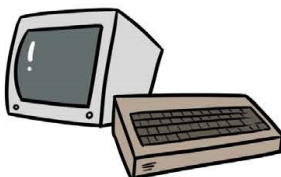


“... if we fail to address
the problem of game preservation,
the digital games of today will disappear,
perhaps within a few decades”



- Before It's Too Late: A Digital Game Preservation White paper (2009)

Loss of access



Legal issues



Damages





There are many ways that the very game that you are playing right now, will no longer be available in the near future

For game museums, this is also about

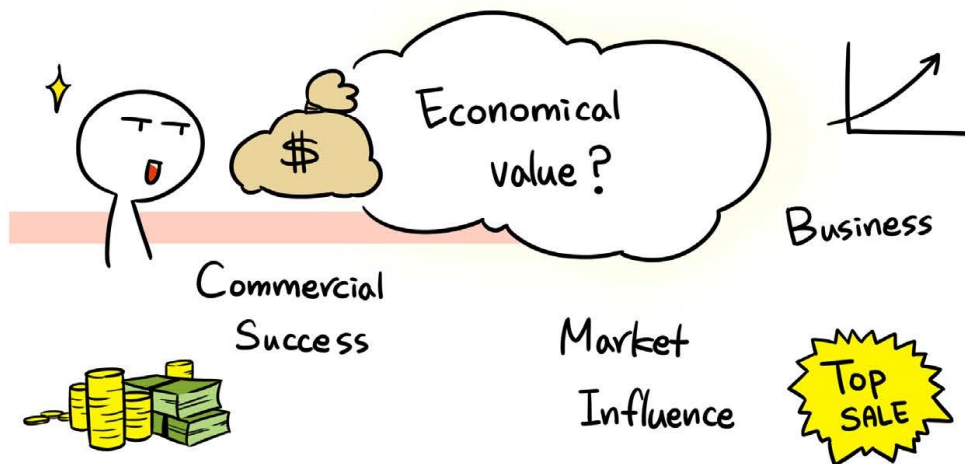
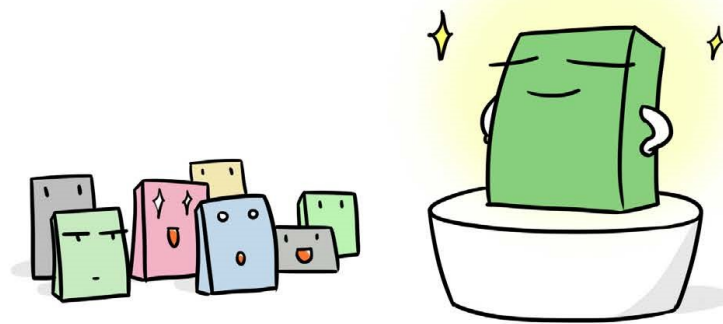
Which game should we display in the museum?

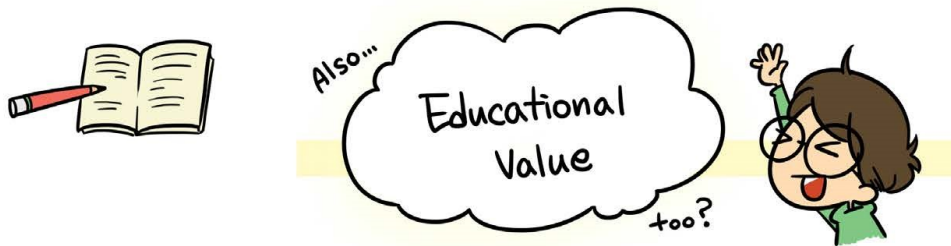
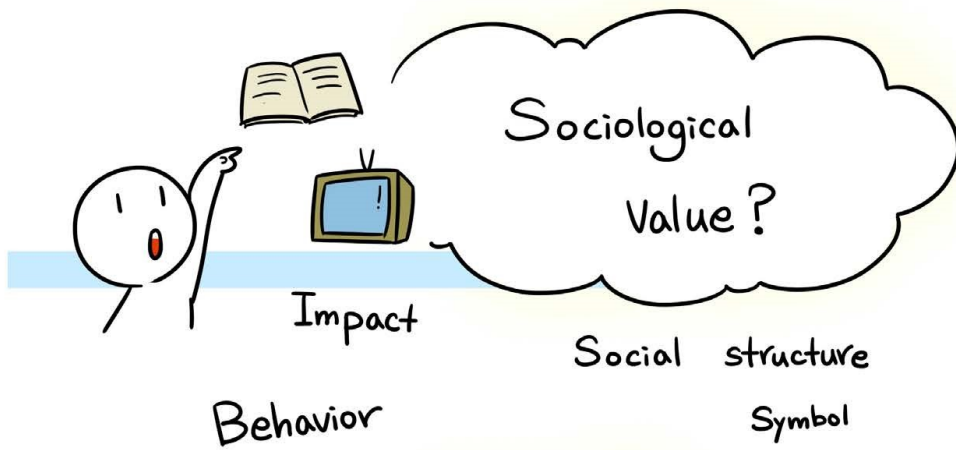
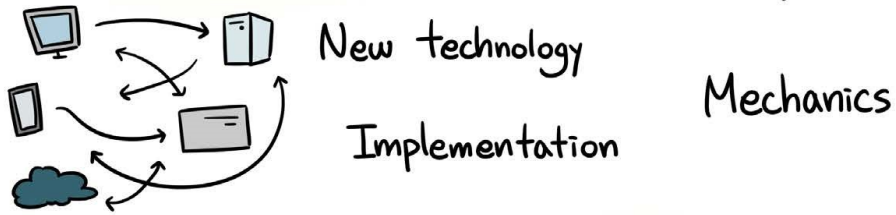
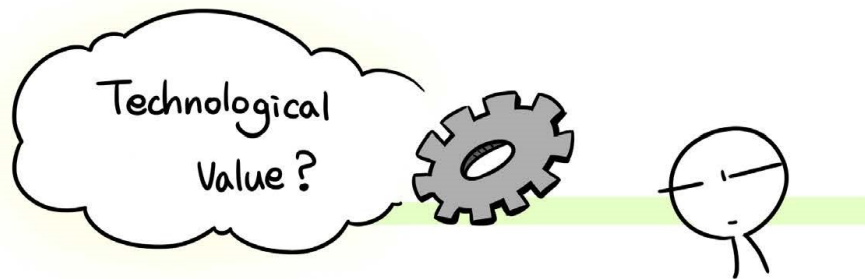


The choices

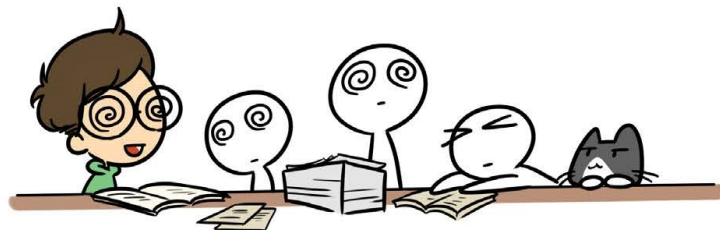
... of which games deserve
to be presented

↪ How to evaluate the game's
historical value?

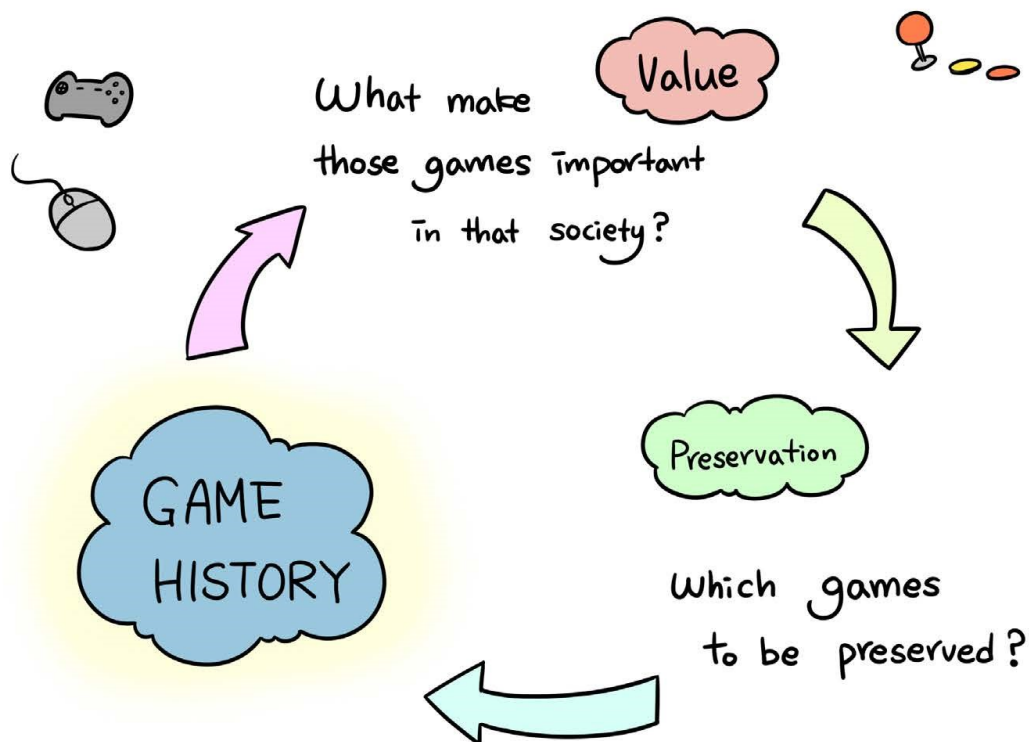
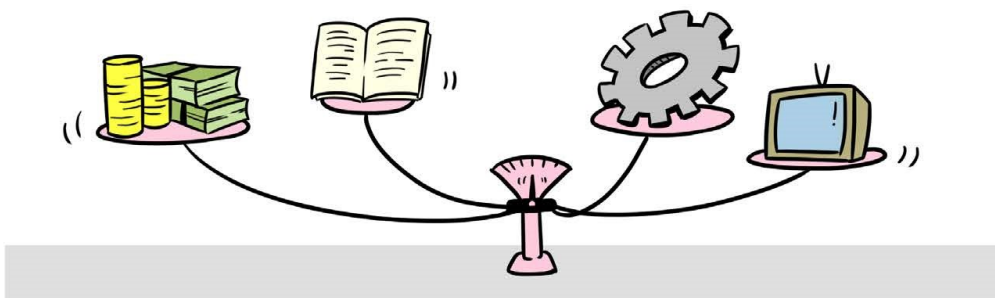


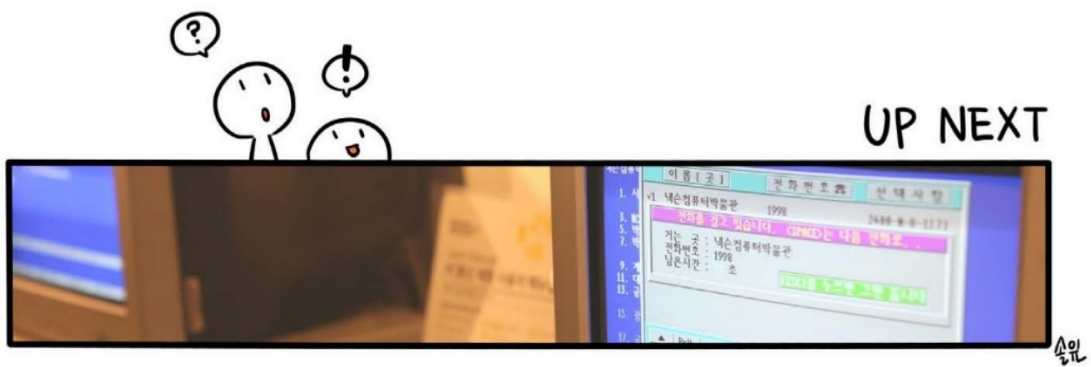


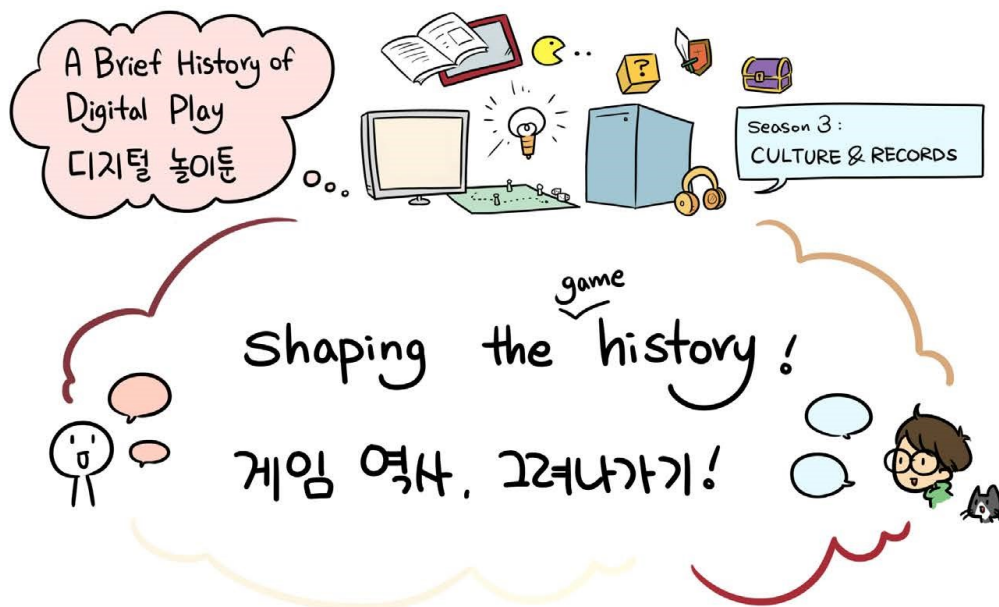
...Yup, sooo many things to be considered!



Every game museum,
also the ones in Korea and Finland,
tries answering this every day







"...the museum's formation needs also be viewed
in a relation to the development of
a range of collateral cultural institutions..."

Prof. Tony Bennett ✦
"The Birth of the Museum"



"...and I'd say, "that's also true for game museums!"



In Finland, the year of 2017 was the 100 anniversary of the country's independence

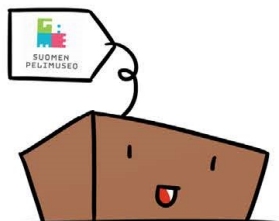
↳ And this also played a critical role in the birth of the Finnish Museum of Games



Made in Finland



Played in Finland

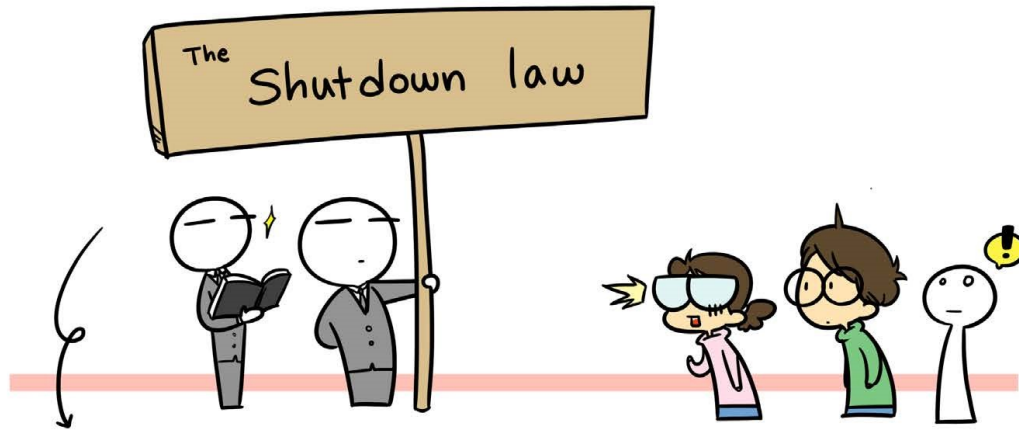


These are
the Important themes
in their museum's display



•
•
•

In Korea, the political situation stepped in

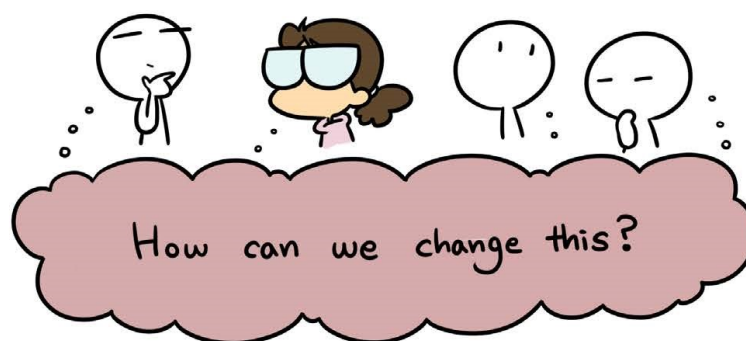


Forbids children under 16 in South Korea from playing online game between midnight and 6 a.m.

Since Nov. 2011



The public reputation of "game" was quite controversial around the time

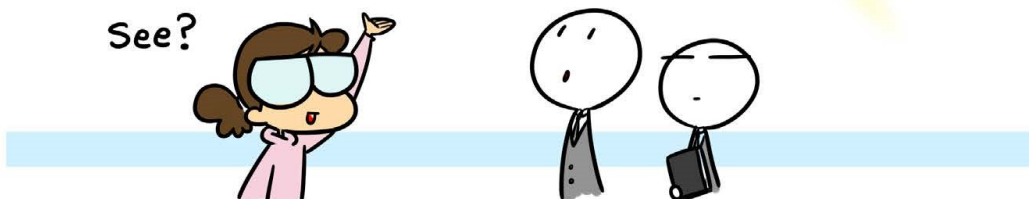


By displaying ⇒ The influence of the gaming industry { Korea
Worldwide



"The commercial success of global gaming industry"

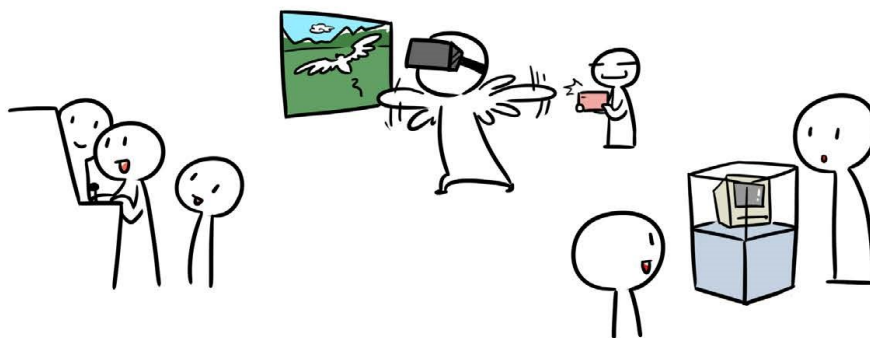
See?



Likewise,

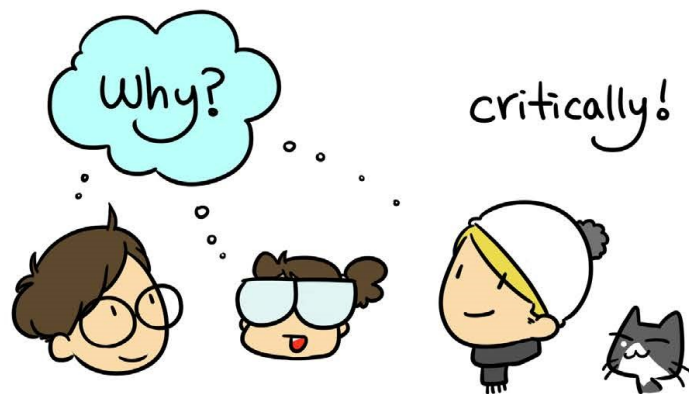


The history of games is displayed
differently depending on the museum's
purpose and context




So next time you visit
game museums, playing video games etc,

Consider to think:



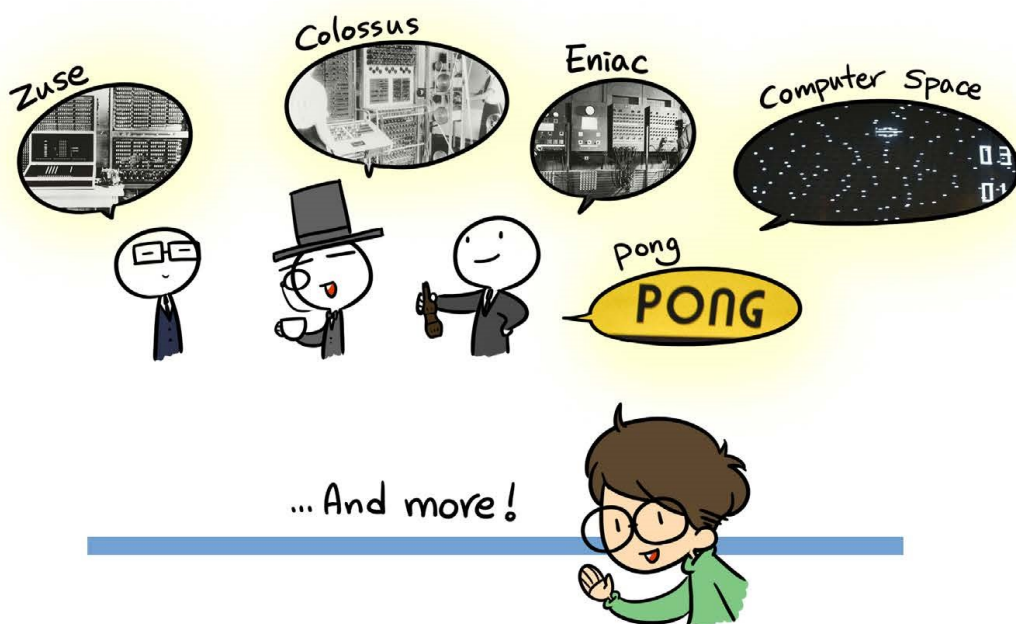
UP NEXT



Written & Illustrated by  Slip & IL



Most ^{digital} early computers and games
that we know of are
from power(?) nations in the mid-20th century



- Finland, 1955 -



Aapeli (NIM Machine)

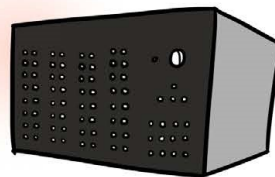
The Mathematics Committee
of Finnish Academy, Hans Andersin



"The first digital gaming device in Finland"

AND

"The first digital game,"^{in Finland}
developed as a birthday present"

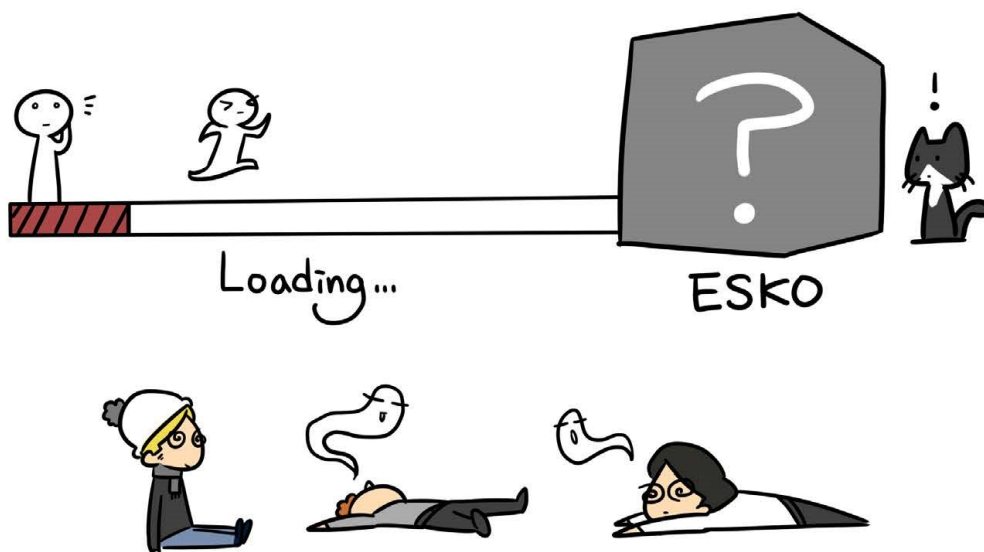


Huh?

Finland started their mainframe computer
research & development in the early 1950s
followed by Sweden and Denmark



But... the project took... quite some time



One day in 1955,
the team noticed...



"It's ^{60th} Rolf Nevanlinna's birthday soon!"



* Wikipedia



Born in
22-Oct. 1895

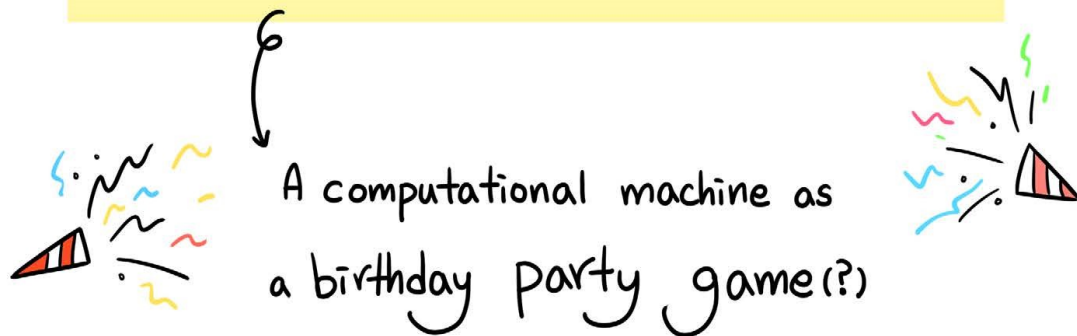
Head of the committee
& Finnish mathematician[☆]

ESKO



Loading...!

So they quickly used some parts
from ESKO prototypes to create
a gaming device"



How to play

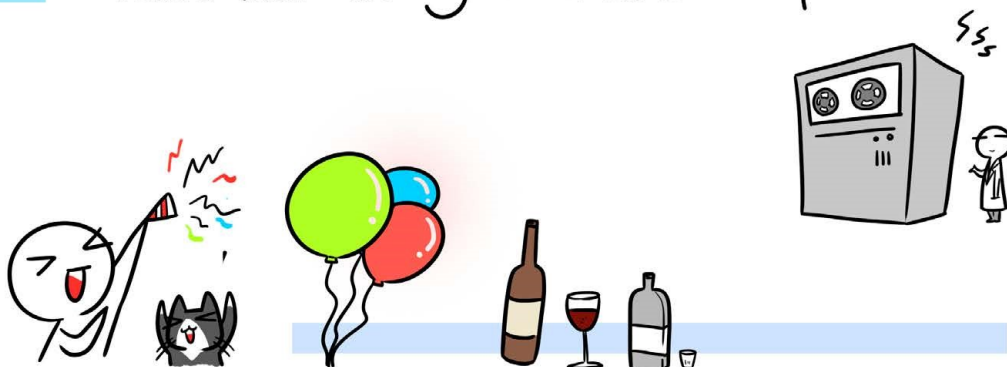
- 1) Switch off the toggle switches;
as many as you want
- 2) Goes in turn
- 3) The player gets the last ^{active} switch, loses



↳ NIM Machine


Later renamed. "Aapeli"

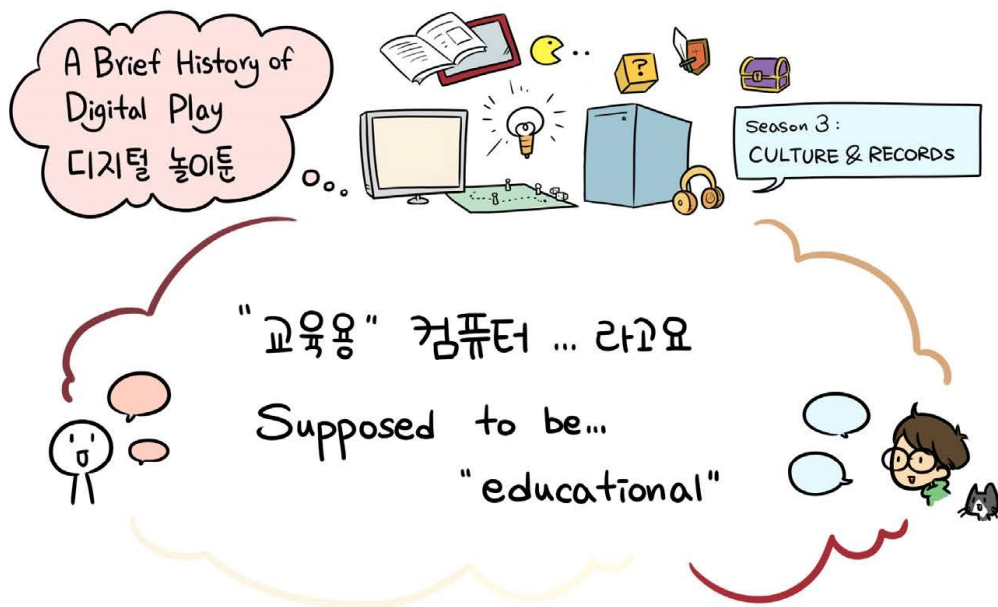
So yes,
Finland ^{kind of} invented
the gaming machine first,
before their working mainframe computer



And of course,
what comes after the party in Finland?

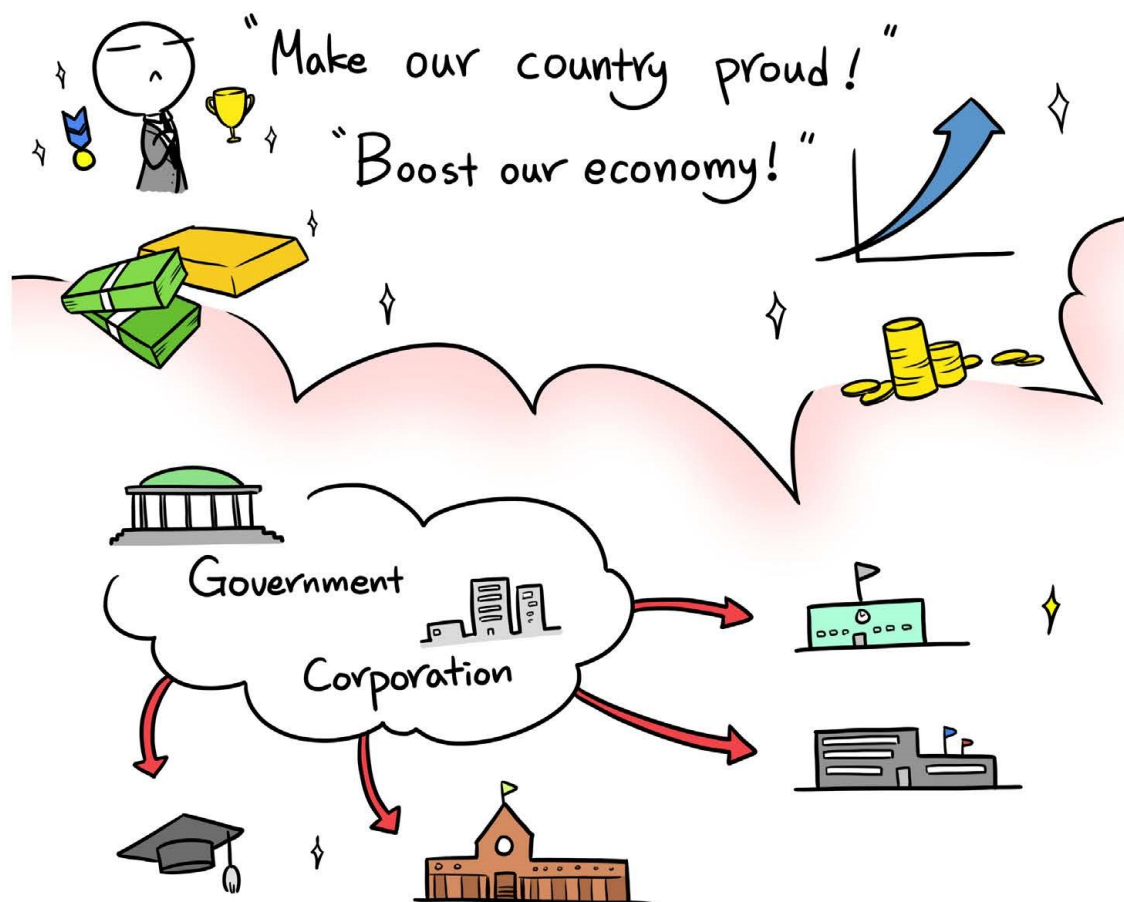
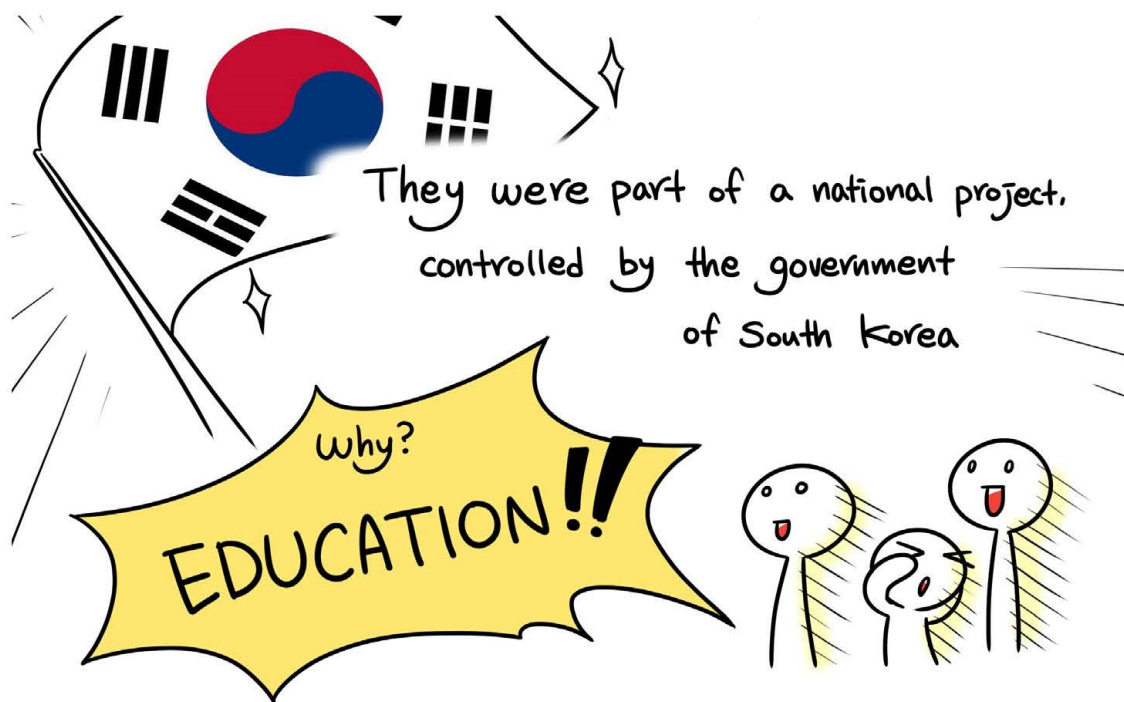


Written & Illustrated by Slip 

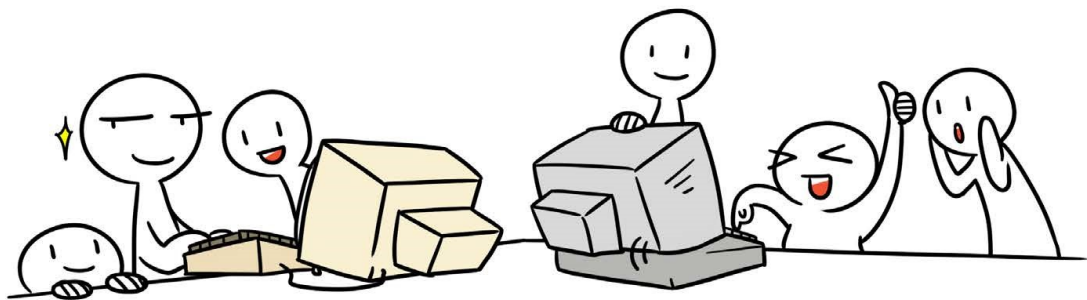


The first South Korean PCs
were manufactured in 1983





These "education" computers were distributed to schools and institutions



Soon students and researchers found out that these "education" computers are also useful for playing...

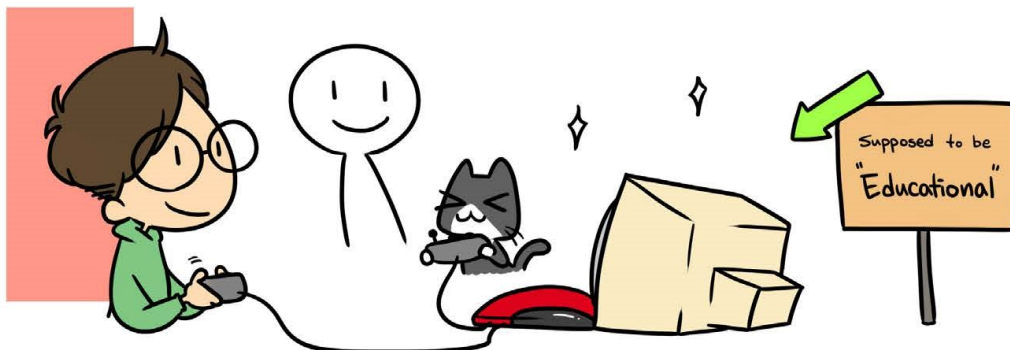
GAMES



Together with
imported PCs,



...these computers
sparked the first digital game culture
in South Korea

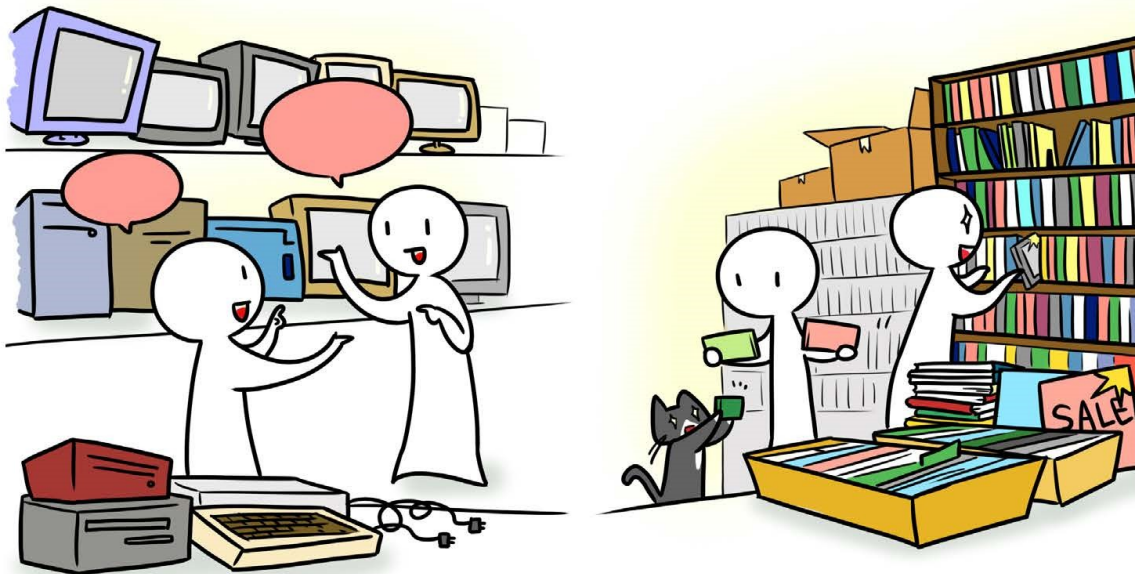


They also boosted the growth of
"전자 상가 (Electronic district)" markets, where
tech-enthusiasts can purchase, sell, and assemble
the gaming devices



"The golden era of
Electronic stores"

(mid-1980s ~ 1990s)



The first Korean video games were also sold here!

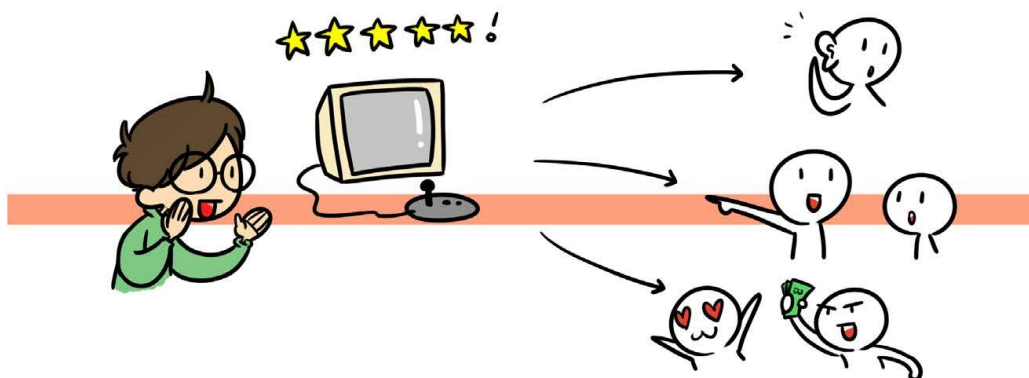
Dream Traveler, 1987



The Day, 1991

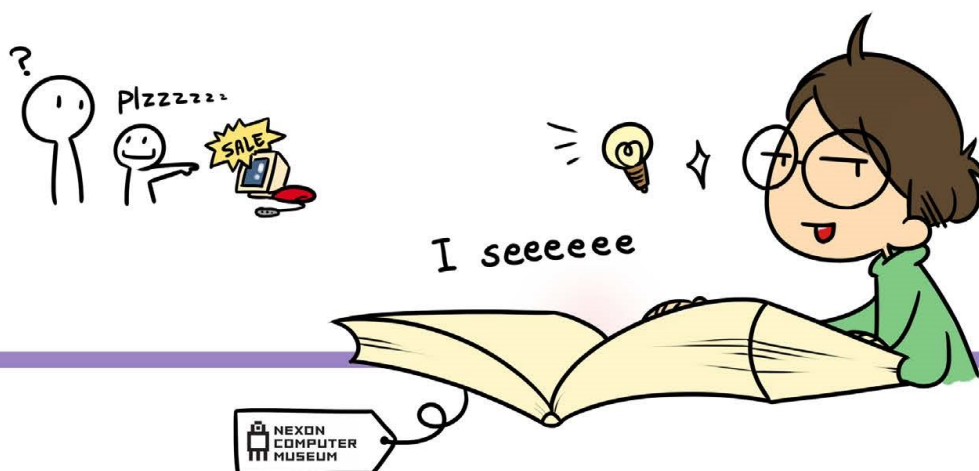


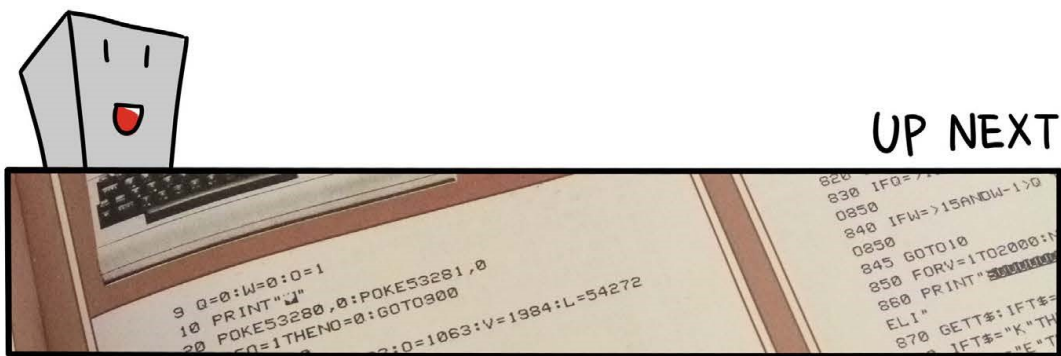
The War of Genesis, 1995~



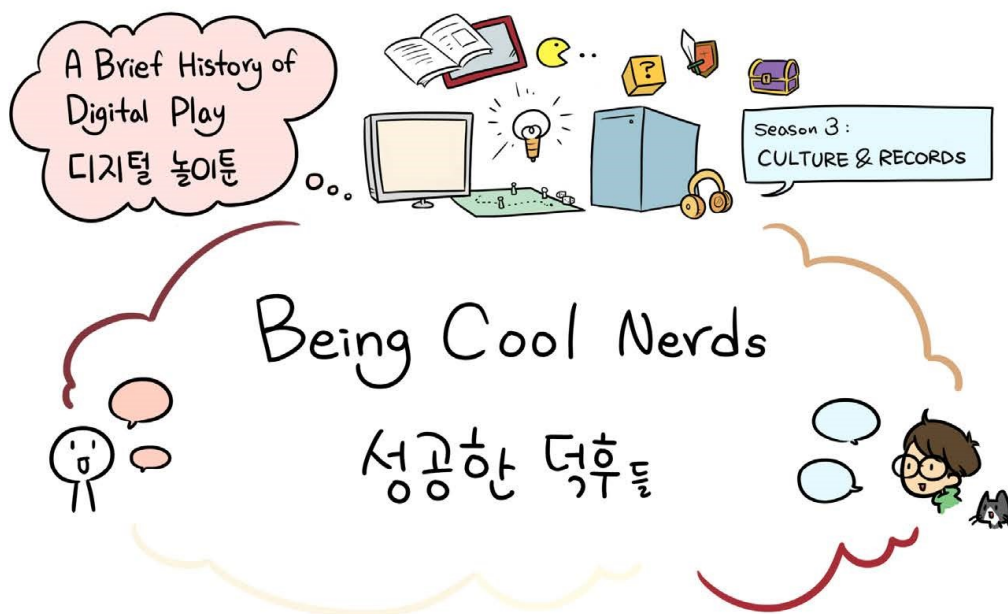
So

To play "games"..
of course Korean kids convinced their parents
that the gaming devices were "educational"





Written & Illustrated by 



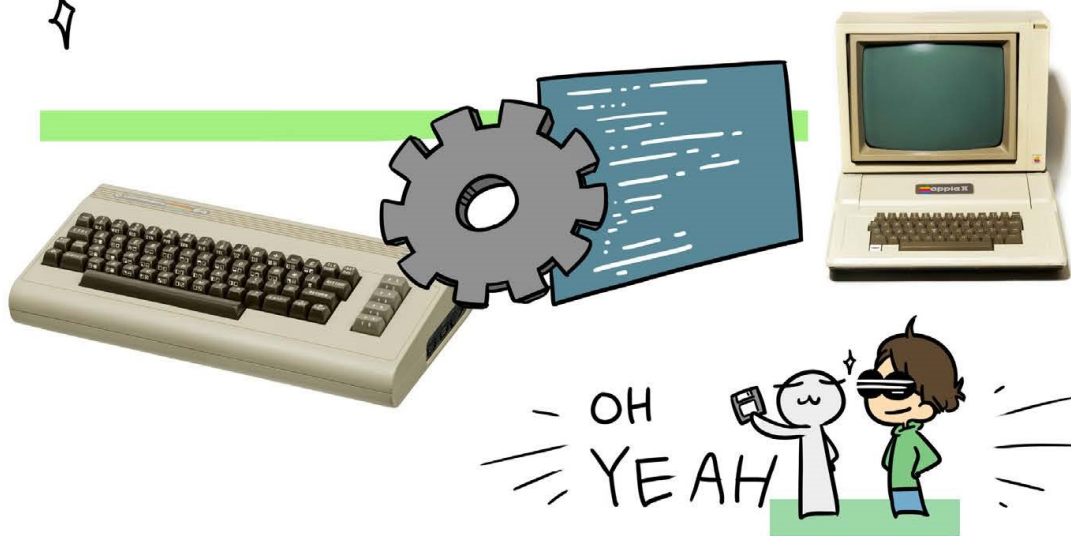
The 1980s were the time of

♥ cool ^{computer} nerds ♥

in Korea & Finland



Gamers, who not just play games
but also develop games themselves ✨



And it just ^{naturally} happened that way because
they had to make game themselves
... instead of buying one



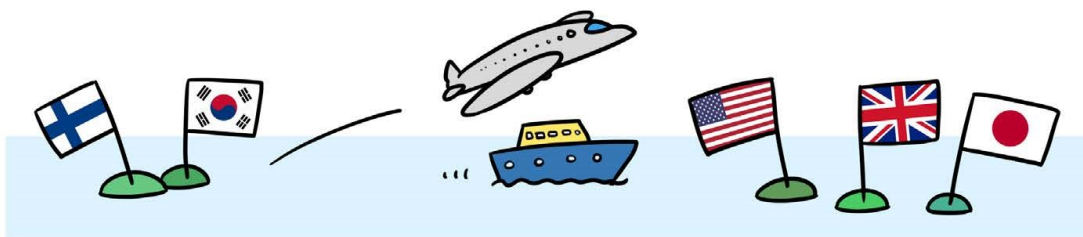
During the early 1980s,
it was veeery difficult ^{T-I} for
Korean and Finnish gamers to purchase
any types of digital games

There were...

NO game stores

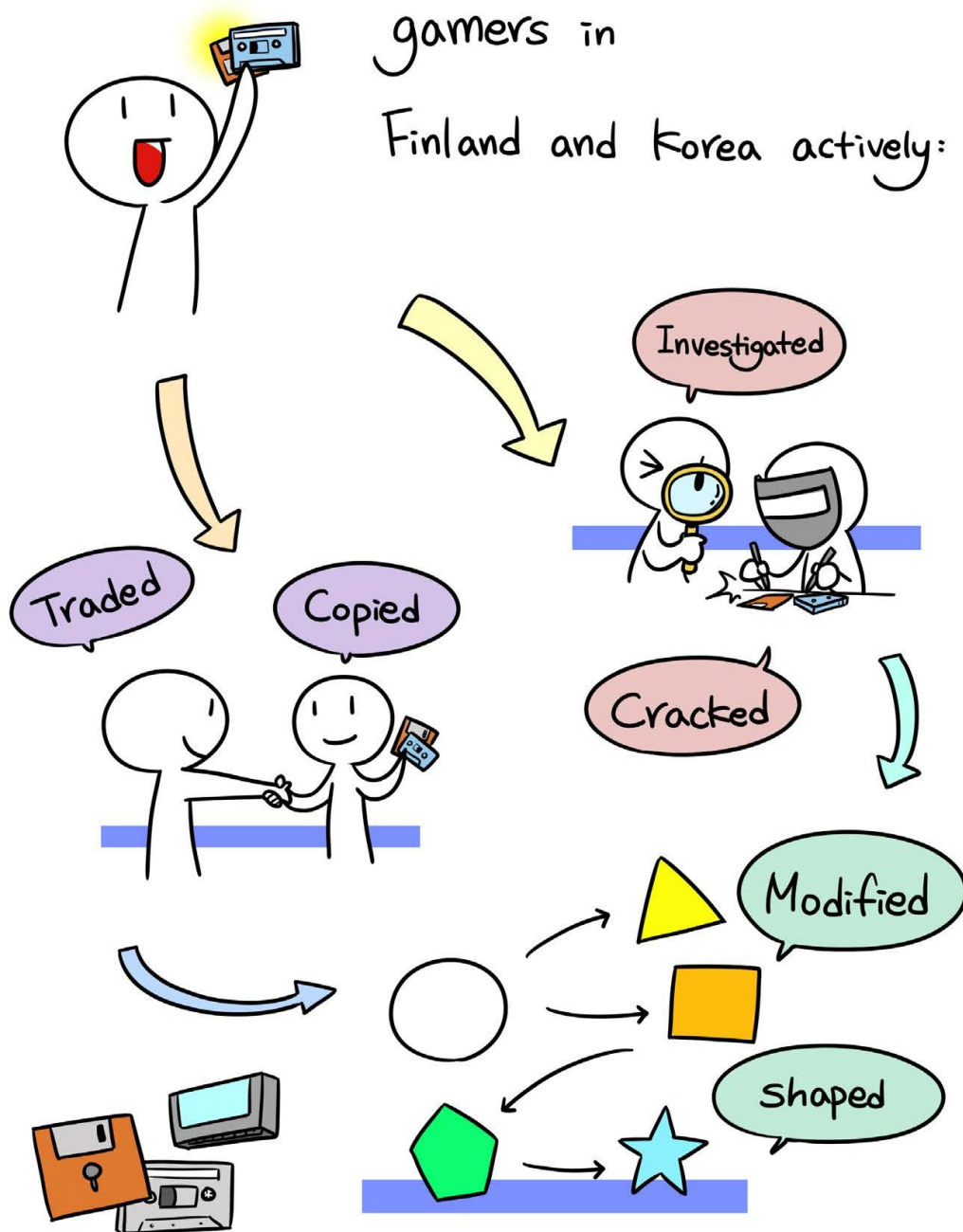


NOT many computers

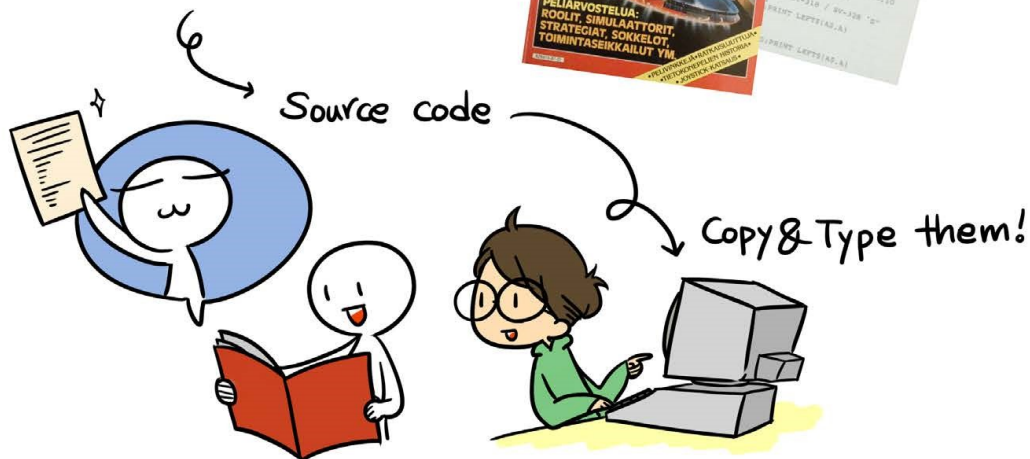


So one had to travel across the sea(!)
to go to the computer & game stores

So, to make the best out of
the few digital games that they have,



In Finland, gamers also distributed their codes through magazines and markets



“ Making games was an integral part of the new gaming culture about to be born at the time, and as it was also the “cheapest” option.

“ ...But above else, it was an issue of pride, one of the things that could be used to tell apart “real” computer hobbyists from those who just happened to own a computer. ”



Niklas Nylund (2016),
The early days of Finnish game culture

The early commercial games
from both countries were
also developed in this environment
by teenagers



Dream
Traveler



by

In-Hwan Nam

by

Pasi Hytönen



Uuno Turhapuro
muuttaa maalle

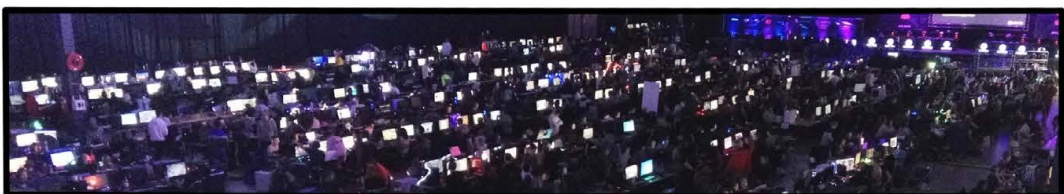


"Uuno Turhapuro
moves to the country"

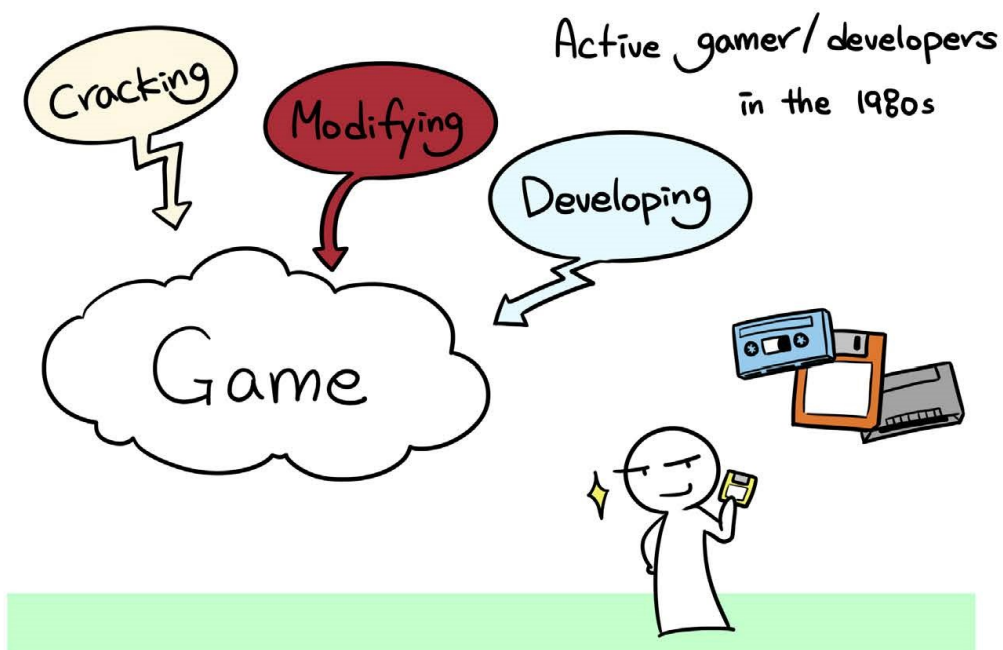
The "Hacker's Culture"



UP NEXT



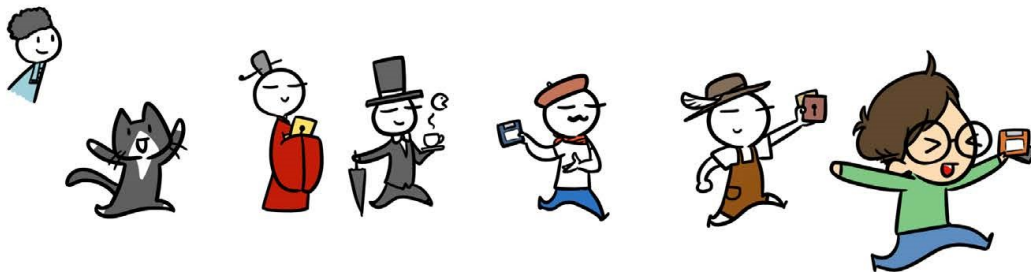
Written & Illustrated by ^{△OI} Sulp_{8TL}



a.k.a

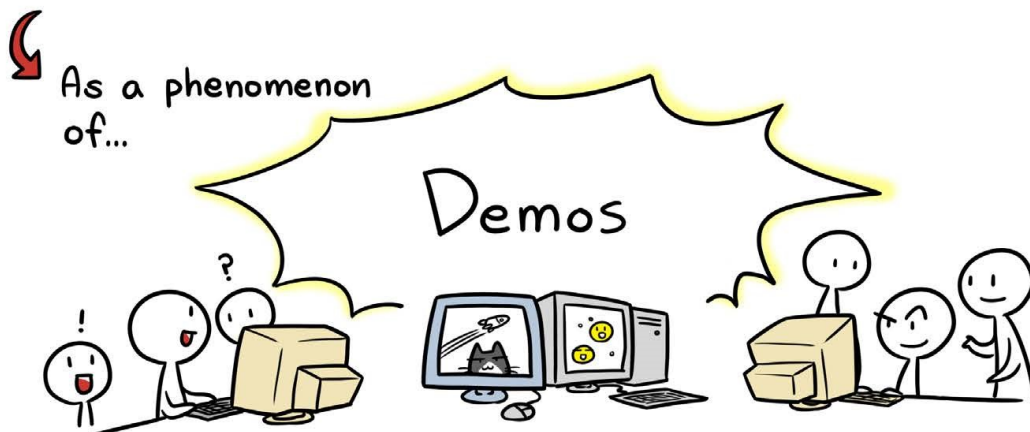
The hackers' culture

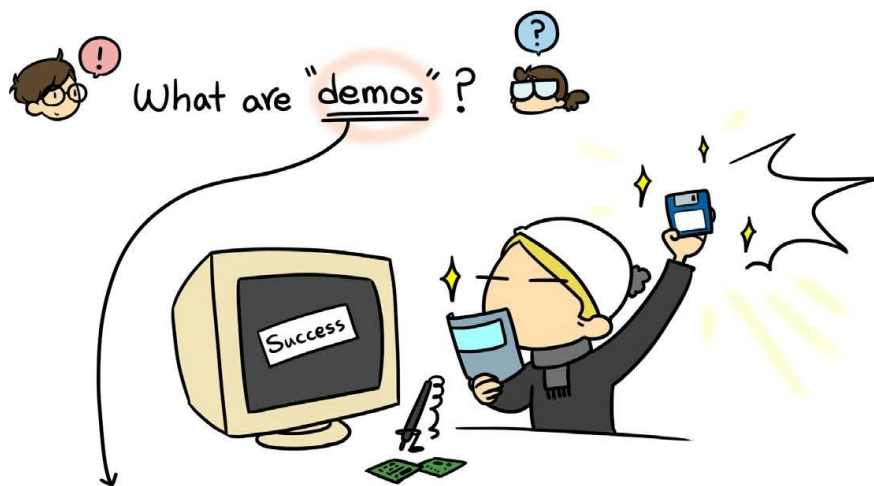
But it wasn't just in Finland and Korea



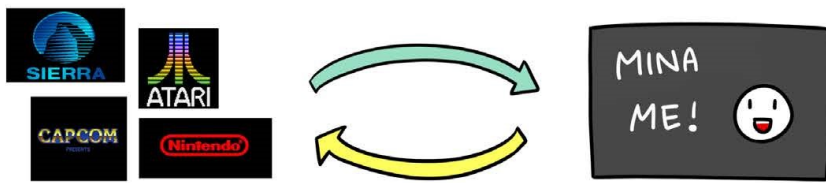
... but all around the world!

↳ Especially in Europe[☆]

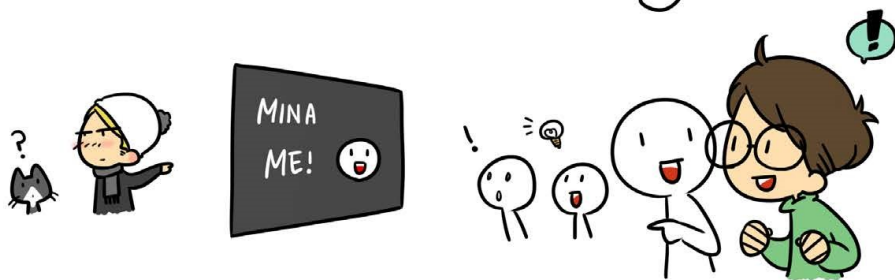




Once the gamer/hacker successfully modified or developed their game,



they often replaced the game's loading/intro video with something of their own → fancy ♥



It was sort of a signature; showing off :D
a proof of their graphics, coding, and engineering skills

The subculture of demo making
was called the "demoscene",



...and became an important part of game culture in Europe"



Then after a while, in the late 80s - early 90s
creating a demo became a form of visual arts
↳ a play of it's own



And then.

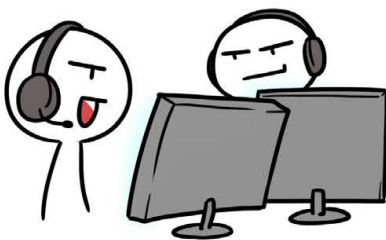
"Demo party"

↪ A convention that people gather
to show off their demos ♡♡



AND
play games together

... mostly men :p



In Finland.

The



(Since 1992-)



The biggest demo party ^{plus LAN party} in Finland
And the longest running demo party
in the world!



Demoscene
& Assembly

The majority of Finnish
game developers or gamers
probably have at least
once been to "Assembly"



UP NEXT

1944-라인강을 건너서-
프리즈너 오브 아이스
메크워리어2
버철파이터 리믹스
팬저드래곤

1997
특별부록 포함
정가 6,500원

5

CD ROM
특별부록

Written & Illustrated by SHIP IL

A Brief History of
Digital Play
디지털 놀이툰



Season 3:
CULTURE & RECORDS

Pirates!

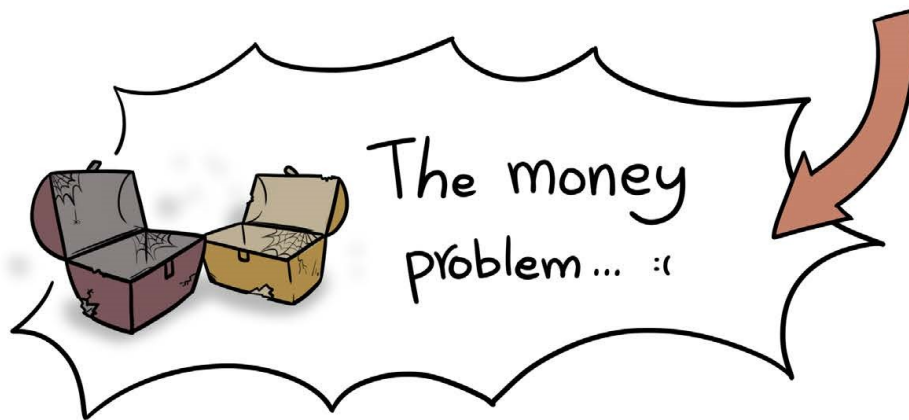
해적·복제판 ...!



Hacker's Culture
in South Korea and Finland
in the 1980s



But it also had some(?) side effect



In the 1990s,

various Korean PC games released as

- ✓ Single play
- ✓ Sold at game stores
- ✓ In floppy disks or CDs



But...

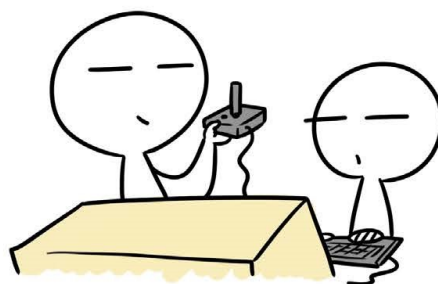


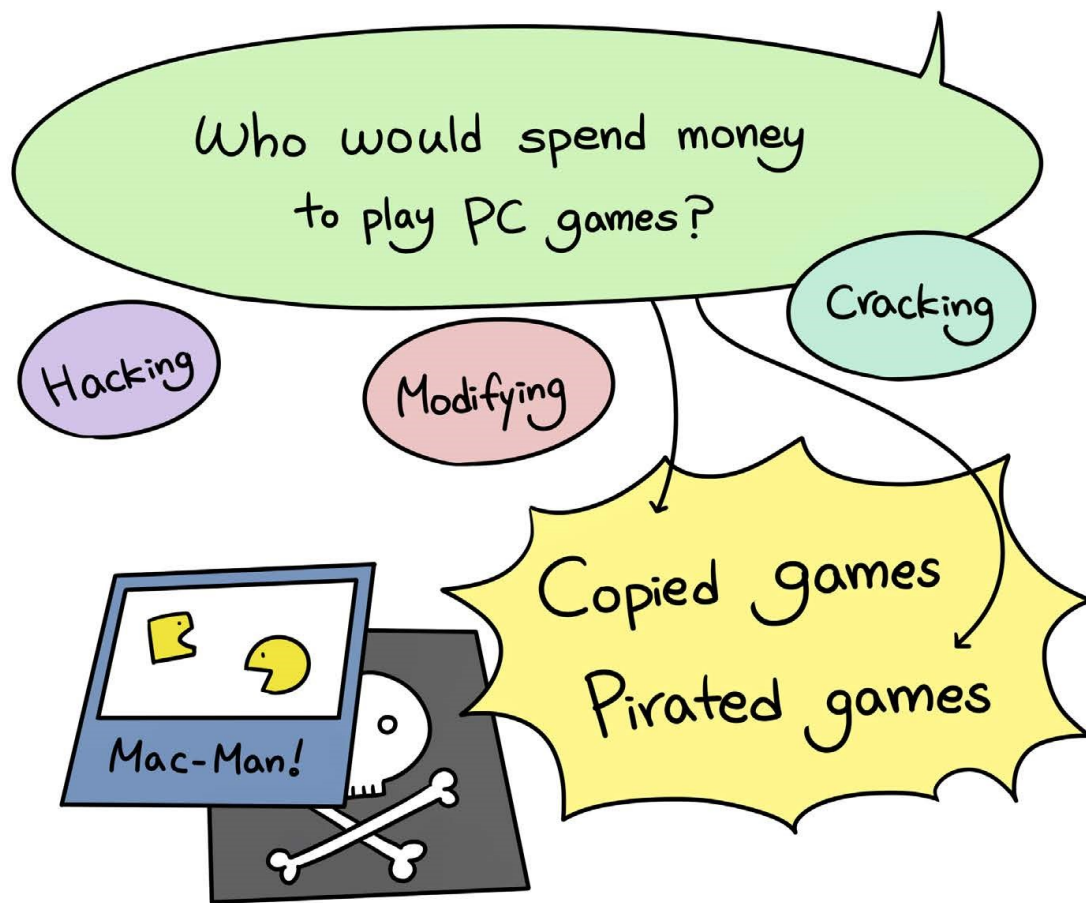
“... Finland (in the late 1980s) was already a thriving black market for cracked and copied games.”



- Niklas Nylund (2016).
The Early Days of
Finnish Game Culture.

Why?

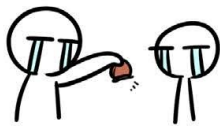




Even game magazines gave away
free(!) game bundle CDs



"...despite the economic recession in the late 1990s, South Korean PC game market still thrived (for a while). But the increase in copied games and free bundle CDs eventually dragged the South Korean PC game industry into a pitfall."



Yoon, et al. (2012)
"한국 게임의 역사"
(The South Korean Game History)

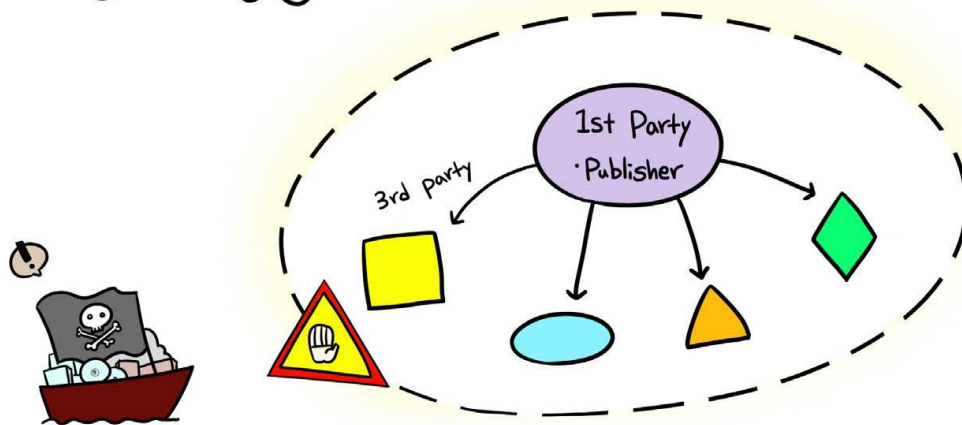


Consoles
on the other hand,

... were protected by
much stronger security measures
and quality check policies

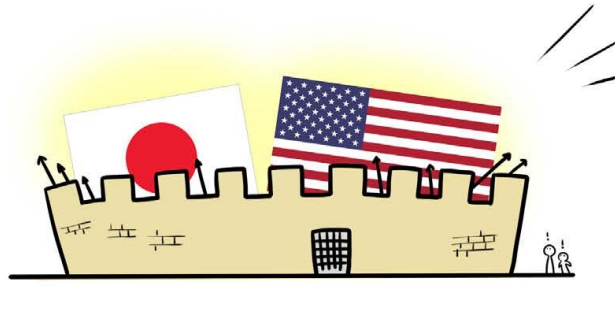


↳ So they had slightly less trouble

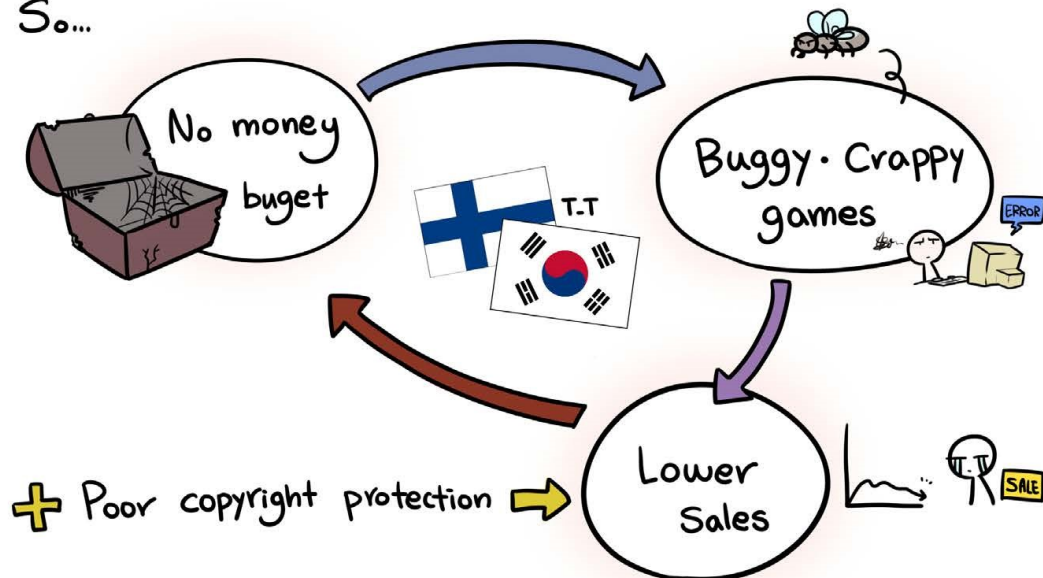


But it was much more challenging to make console games in Korea and Finland than making PC games.

Compete against
block buster games
from Japan & USA



So...



Magna Carta, 2001



Arcturus, 2000

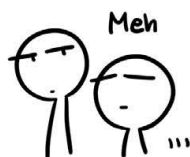
Eventually,
Korean PC games
recorded a devastating
financial failure in
the early 2000s



White Day, 2001



Cheollang Yeoljeon, 2003



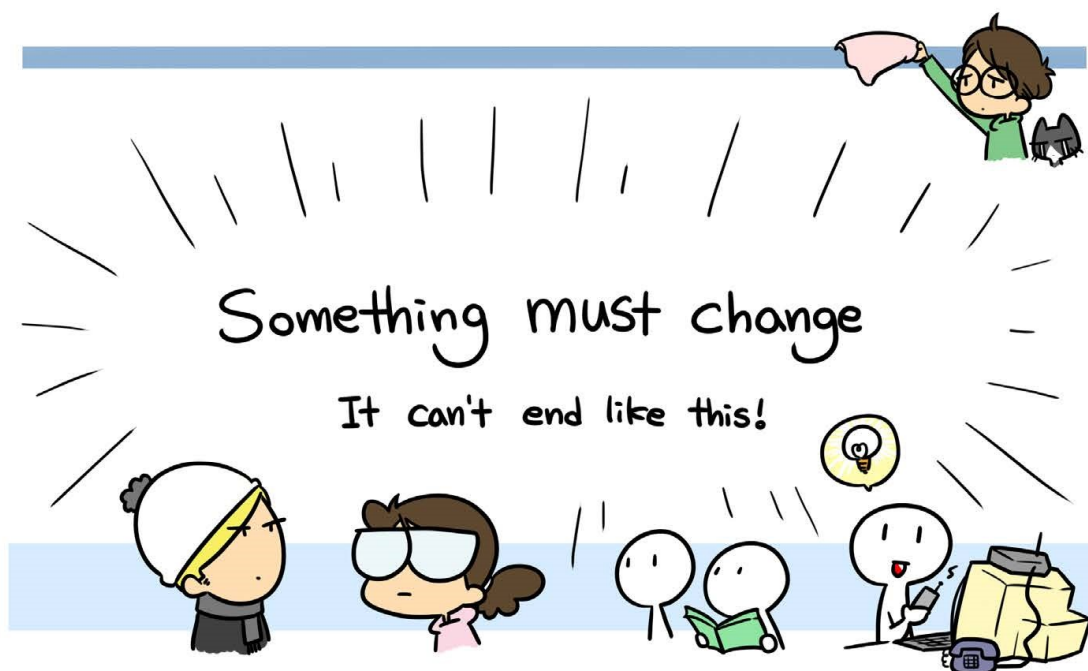
Sales
Profits



Development cost
Marketing
publishing
...




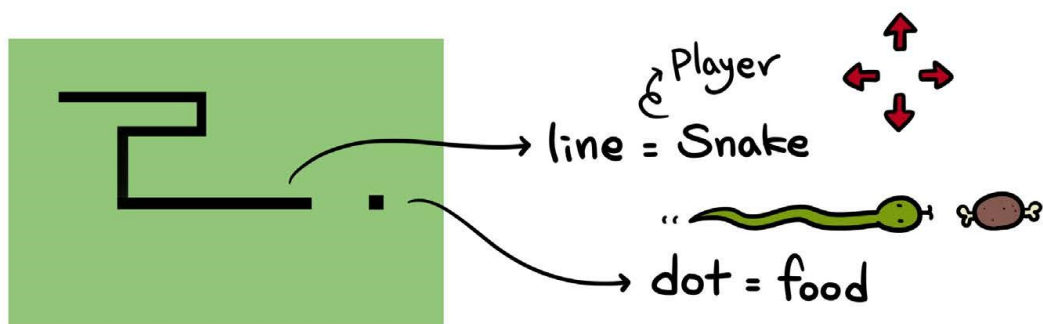
“ The fall of South Korean
Packaged PC game Industry – the White Day Crisis ”

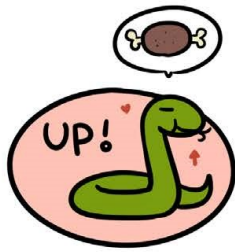


UP NEXT

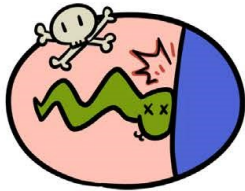


Written & Illustrated by  Saff B.L.

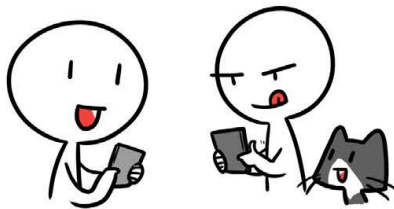




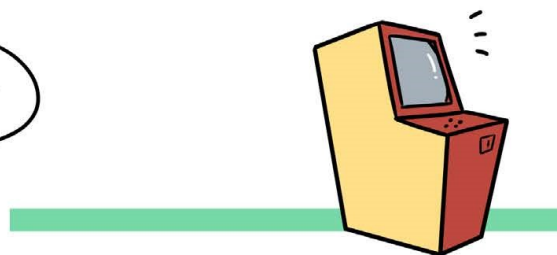
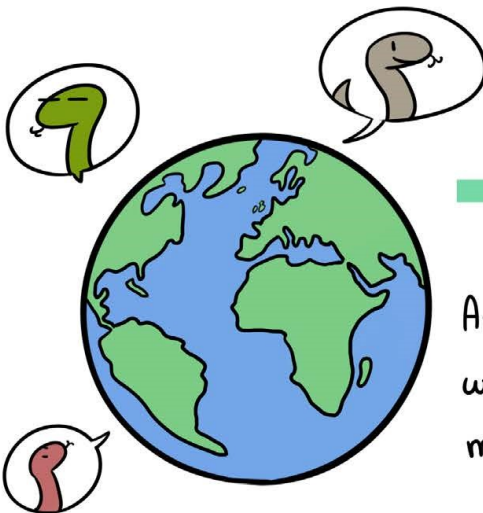
Eating the dots (foods) makes the snake grow in length



But the game ends when the snake hits the edge of the screen or its own tail

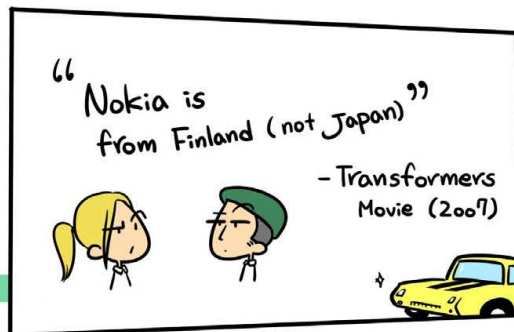


This simple, and addictive game was first introduced in 1976



And became famous worldwide due to a Finnish mobile phone company.

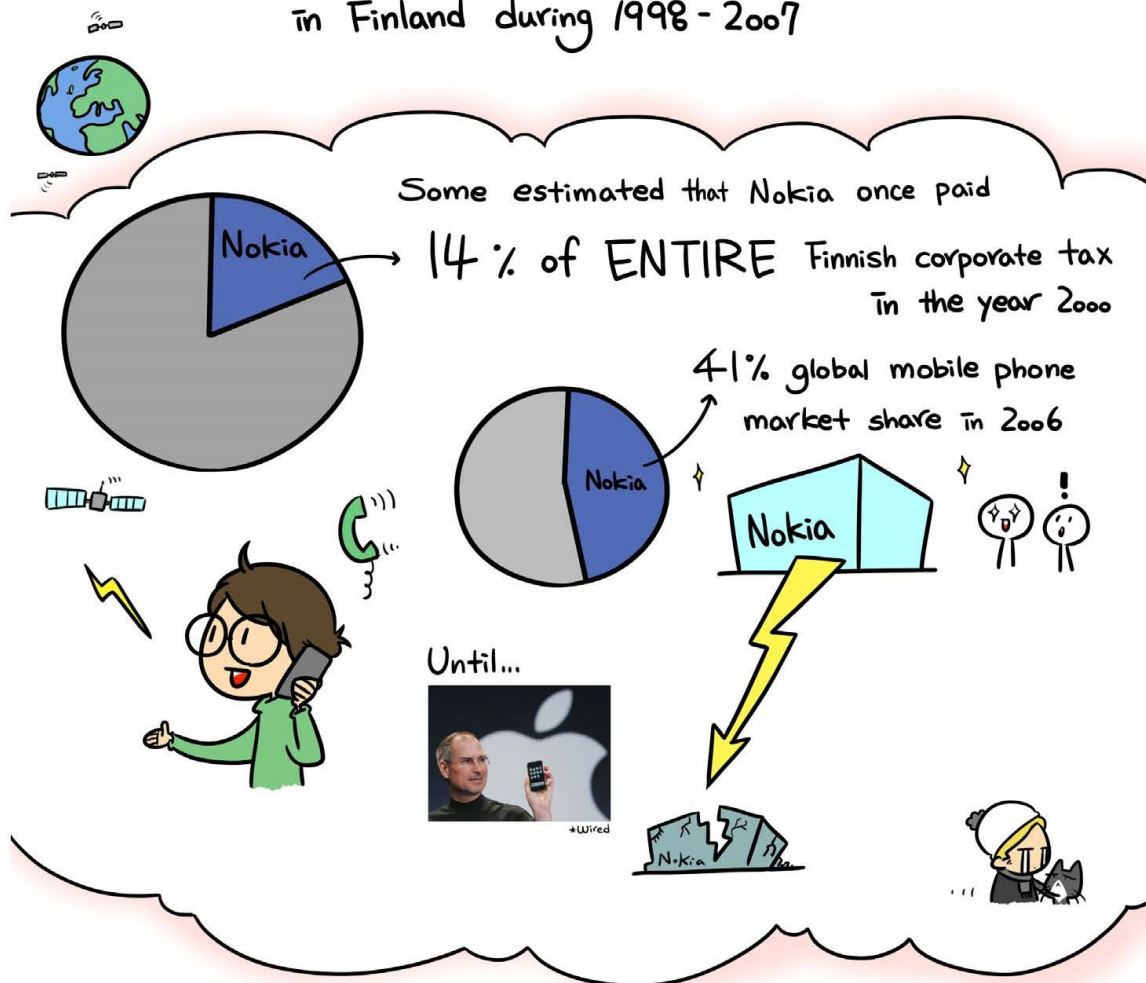
NOKIA



Matopeli (Snake game)

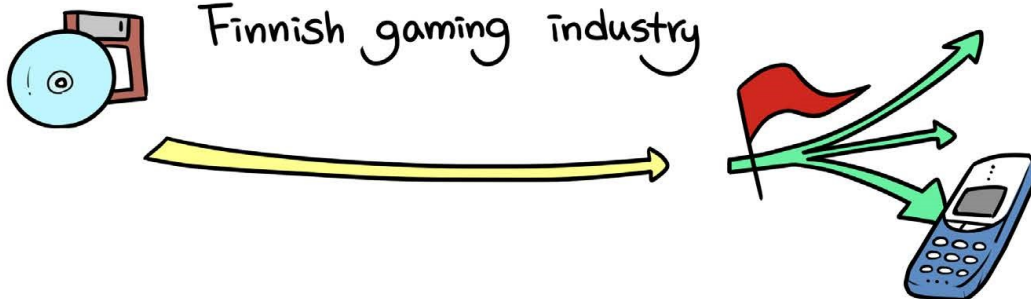
Released with
Nokia 6110 (1998)

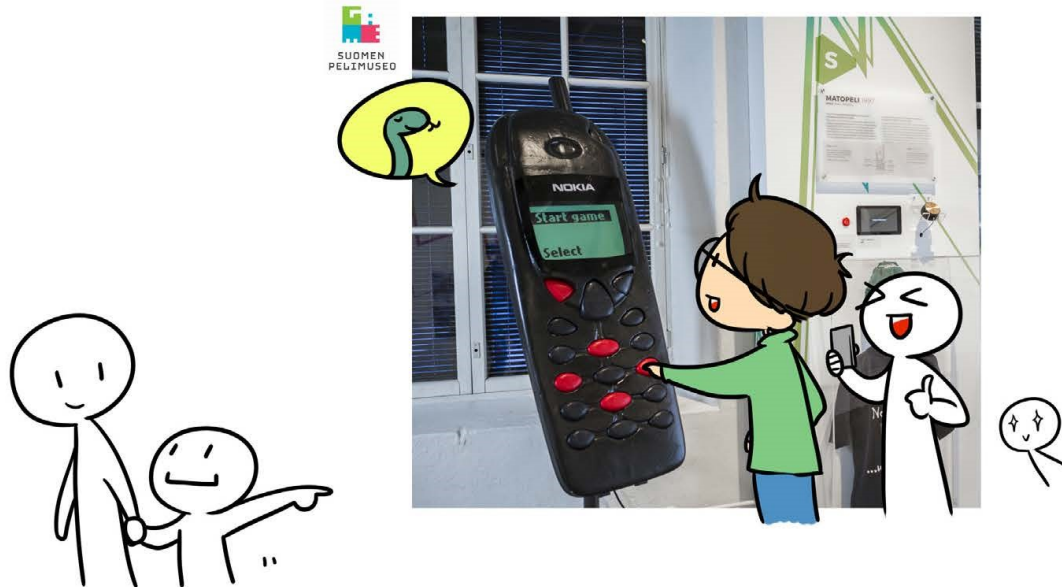
Btw. Nokia was **THE** industry
in Finland during 1998 - 2007



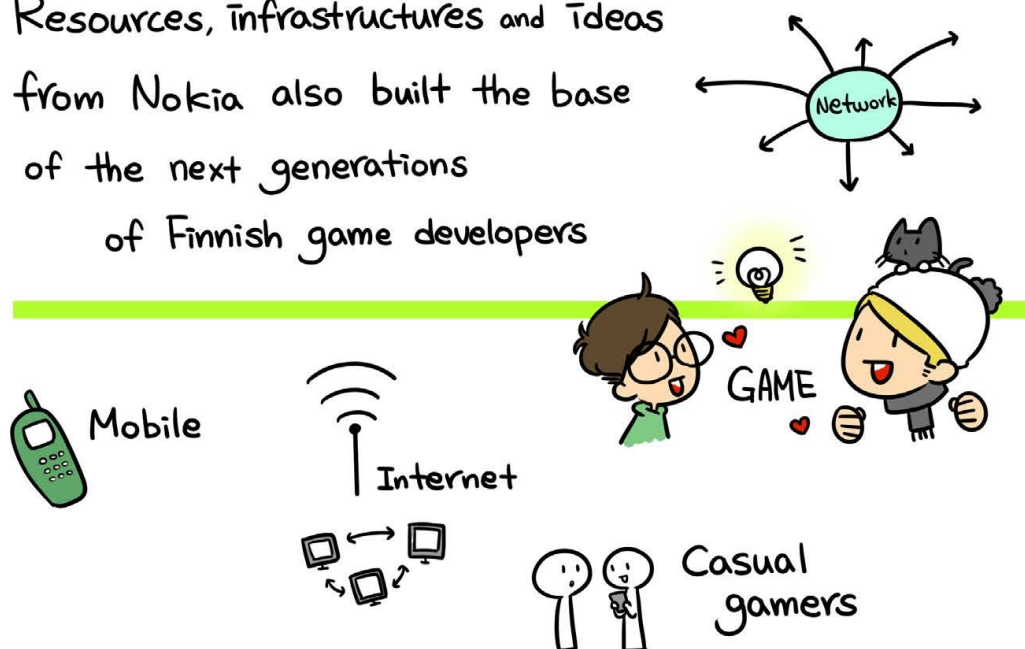


Nokia's growth was
also a pivotal turning point for
Finnish gaming industry





Resources, infrastructures and Ideas
from Nokia also built the base
of the next generations
of Finnish game developers





But then...
well... Yes, that happened...

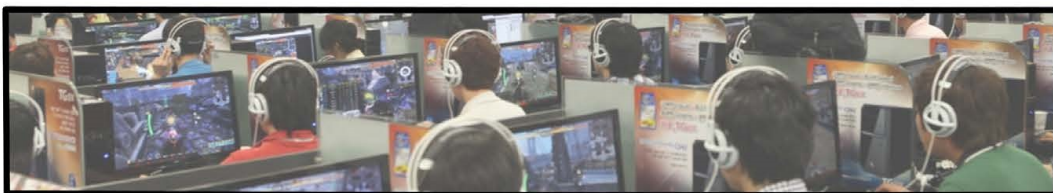




We'll be
back!

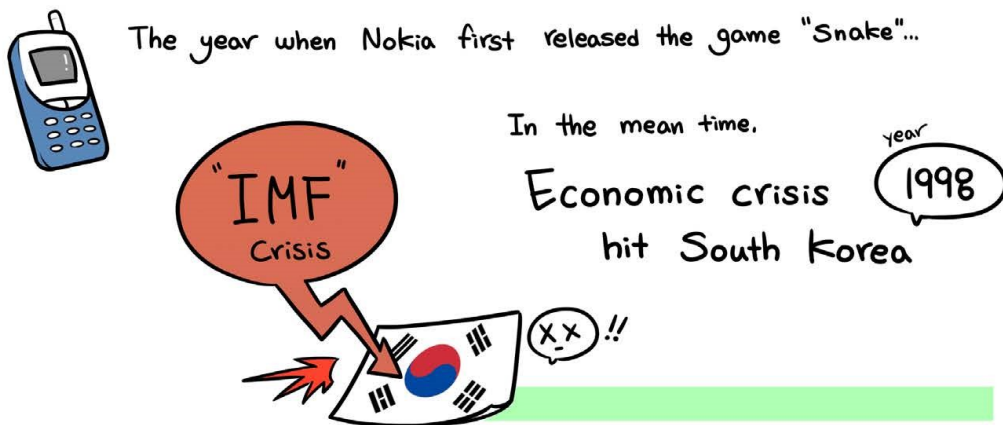
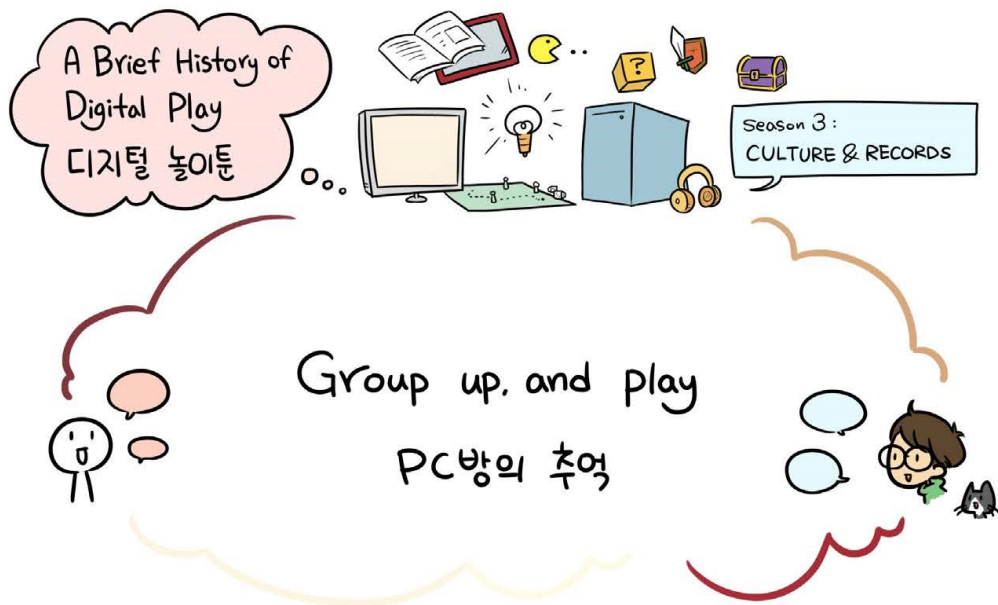


#Sisu

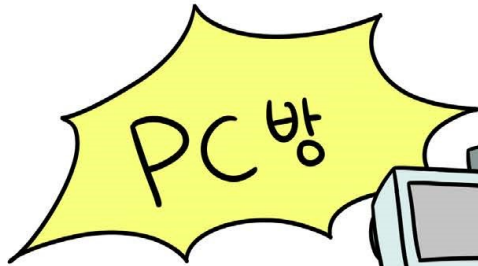
UP NEXT



Written & Illustrated by  SUIP 



Just then,



PC bang business
became a new business
opportunity for job seekers

→ affordable enough
→ easy enough
to start right away

What is PC bang?



24/7
LAN Party

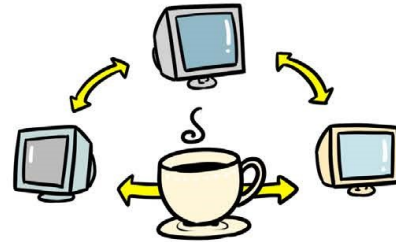


Around
1000 KRW (0.9 USD) per hour.
unlimited gameplay

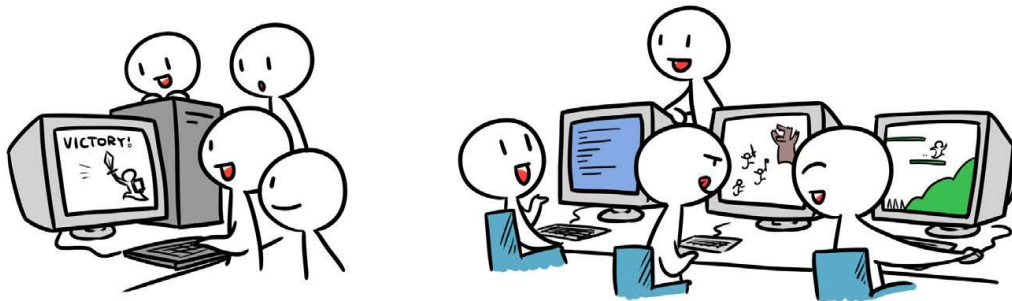


*Various Sources

A first PC bang ^{in Korea}
 was founded in the early 1990s
 as "Internet Càfe"

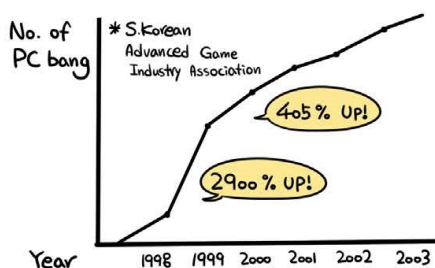


It was originally
 a place where people can try out the internet

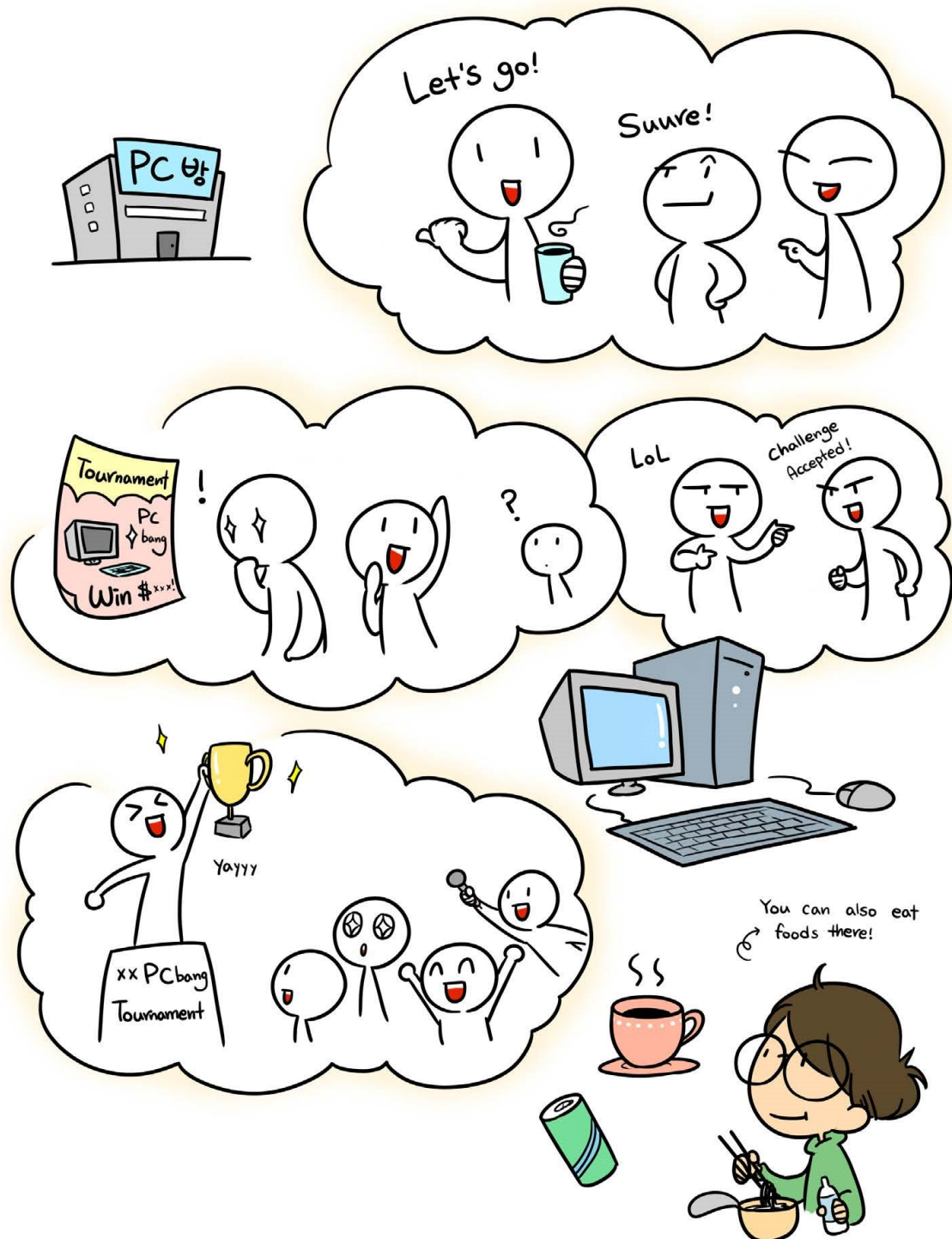


Soon, they became the 'Arcade'
 of PCs with network connection

The number of PC bang skyrocketed
 in Korea in the year 1999, a year after the IMF crisis



And soon became the central hubs
of South Korean gaming culture
in the 2000s.



Every PC bang is equipped with



high-speed internet



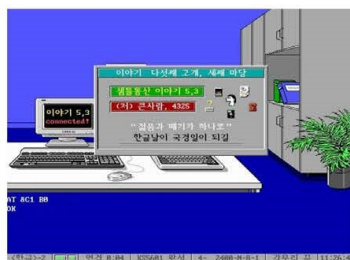
& advanced gaming PCs



A perfect condition
to play MMO games :)



Lineage
1998



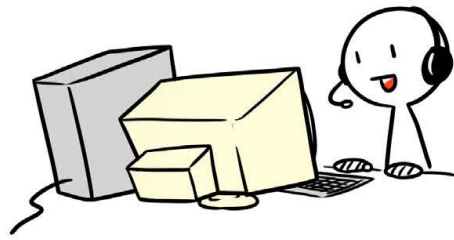
The Kingdom
of the Wind
1996



Dial Up Internet

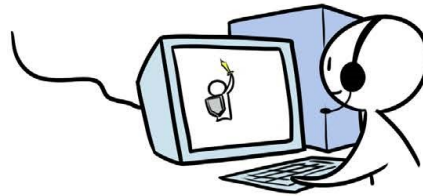
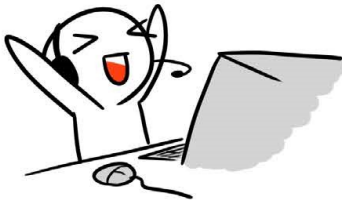
↳ chat
↳ Online groups/clubs

By the time of the early 2000s,



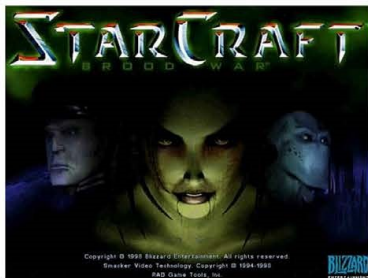
PC bangs became the most important
force(!) in the South Korean gaming industry

Game companies actively promoted their games
through PC bangs → Events
→ Coupons... etc



“ Computer as Theatre ^{→ Brenda Laurel}
& Open Stage ”
^{→ Nexon Computer Museum}

and of course...



UP NEXT



Written & Illustrated by ^{△OI} SWIP _{8TL}



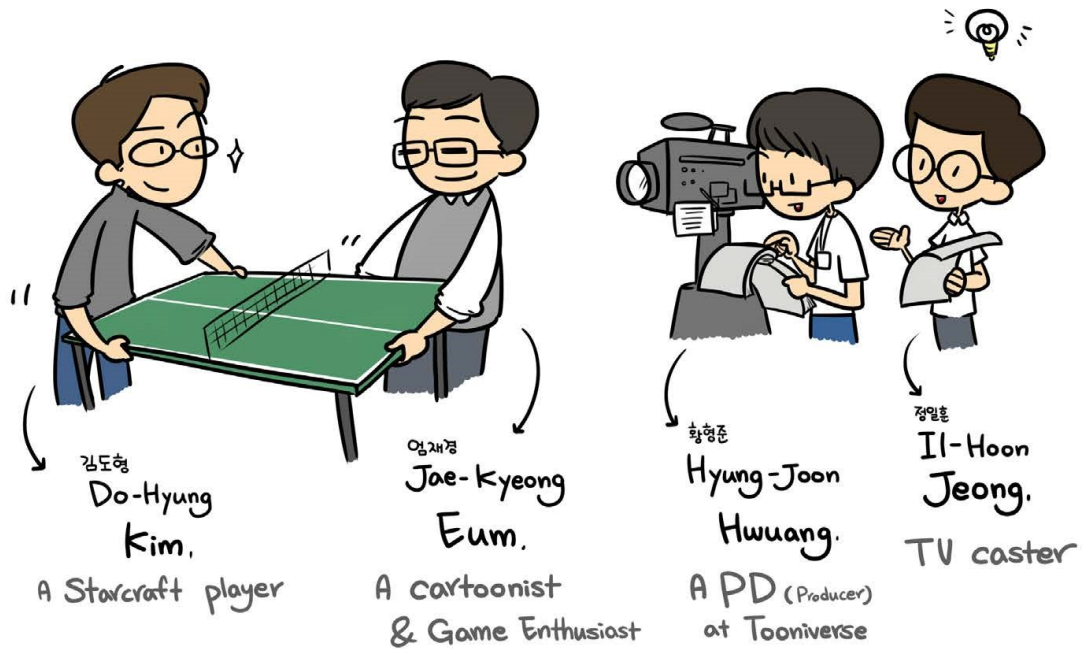
November 1999
Seoul, South Korea



A group of men gathered
in a tiny studio at Tooniverse building
→ A children & animation
TV channel in South Korea.



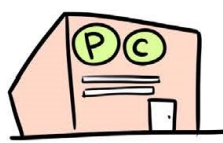
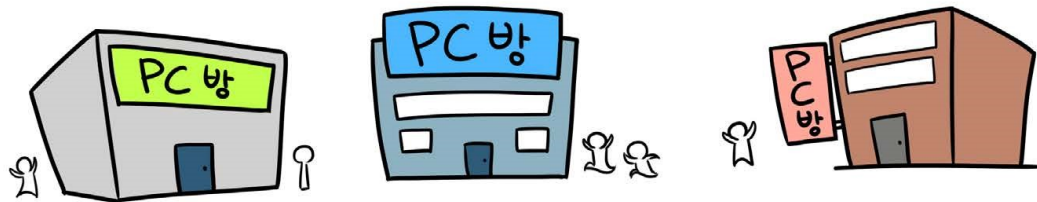
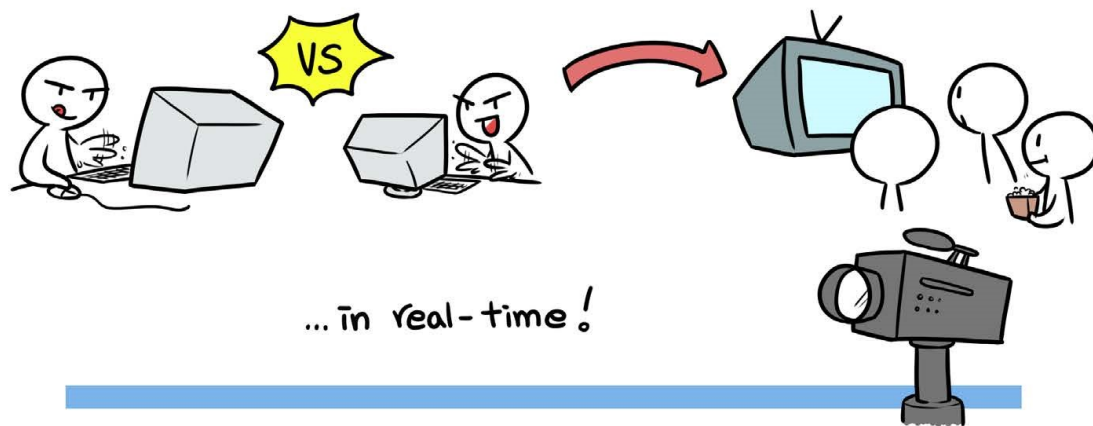
...setting up a Ping Pong table and a camera



Hwang led
FIFA 98 game broadcast
at Tooniverse
earlier that year



Inspired by its' great viewing rate & responses,
he decided to broadcast
video game matches



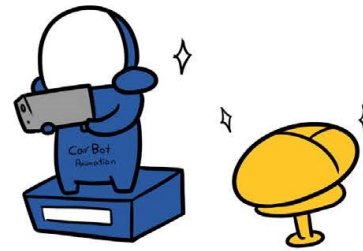
In 1999.

PC bangs were booming
with THE video game ^{In Korea}

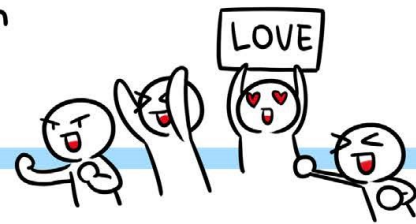


"Starcraft"
by Blizzard, 1998



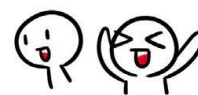
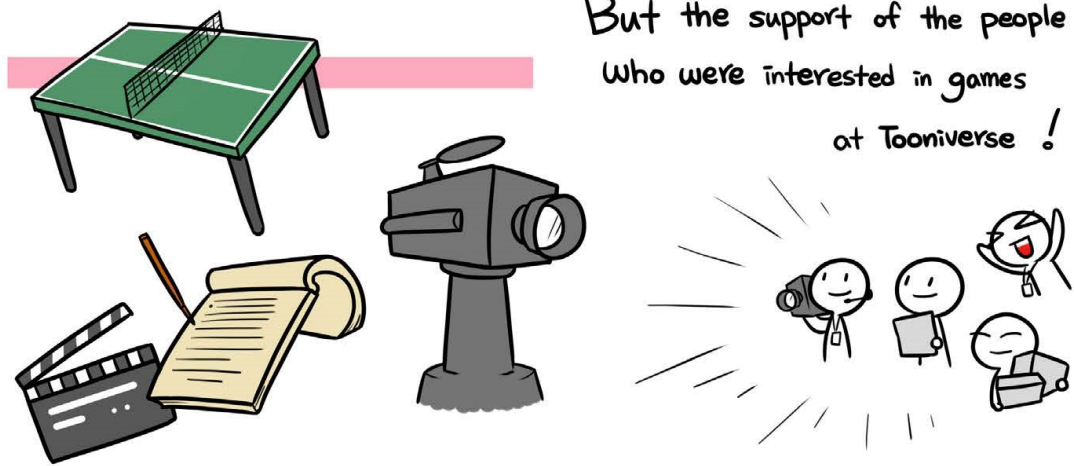


PC bangs often held their own
Starcraft tournaments



They only had...
a ping pong table, some cameras...

→ Instead of a proper table
for the casters...





More players joined,
corporate sponsorship grew,
and the tournament became bigger and bigger!



A year later,
in 2000...



Hwuang and his colleagues founded
a brand new TV channel,
a spin-off from Tooniverse

The first TV channel dedicated to ^{competitive} video games

The birth
of eSports!

